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DEVELOPMENT OF THE CHILD IN LATER INFANCY

BEING PART II OF
THE INTELLECTUAL AND MORAL
DEVELOPMENT OF THE CHILD

BY
GABRIEL COMPAYRÉ
RECTOR OF THE UNIVERSITY OF LYONS

TRANSLATED FROM THE FRENCH BY
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EDITOR'S PREFACE

THE present volume contains the second half of the translation of the work of Prof. Gabriel Compayré, rector of the University of Lyons, entitled "*L'Évolution Intellectuelle et Morale de l'Enfant*." The first part (printed in Volume XXXV of this series) treats of the newly born infant, of his first forms of activity and the beginnings of the five senses—sight, hearing, smell, taste, and touch. Besides these, he takes up the subject of the first emotions, such as fear, love, and selfishness, and their expression, memory, imagination, and consciousness.

The present volume treats of the functions that develop into prominence in later infancy, namely, (1) Educative instincts, such as imitation and curiosity (Chapter I); (2) judgment and reasoning (II); (3) learning to talk (III); (4) activity dependent on the will: walking and playing (IV); (5) development of moral sense (V); (6) faults and virtues of childhood (VI); (7) mental alienation in childhood (VII); (8) feeling of selfhood and sense of personality (VIII).

Let us consider in its outlines the problem that all child study has before it. In general its pre-

liminary object is to learn how the infant gets possession of his body so that he can use his senses for obtaining a knowledge of the external world, and so that he can use his motive powers in reaction upon the world, making of his muscular system an instrument to change or modify his environment and adapt it to his desires. This, as we see, involves an investigation of two phases of infant activity: the one directed inward—the growth of the intellect; and the other directed outward—the reaction upon the environment, the growth of the power to control matter by the will. The former develops out of the sentient side of the mind and the latter out of the motor side.

Both of these provinces of activity contribute to the development of the selfhood of the infant, and we could well say that he reveals that selfhood to us by the mode and manner in which he uses his senses to obtain knowledge and his motor organs to react upon his environment. By the same acts that he reveals himself to us he becomes conscious of himself.

In another way of describing this process, we may claim that child study deals chiefly with the development of character. The character is the aggregate expression of the will. It is not the mere desire or aspiration, but rather the actual volition—what one has willed—that reveals the personality, that is to say, the character.

It is taken for granted that the self may change his character by willing better or worse things. The character is therefore not a finality; the self is lord over its expression of itself, and can modify or

change not only its particular but its general modes of manifestation.

It is evident that all facts relating to the conscious modification of character are of the highest value in the study of infant development. In Mrs. Ewing's *Story of a Short Life* a sudden change in the character is described. The invalid child suddenly assumes the mastership over his evil humours and deliberately sets aside his selfishness and subordinates it. In that case a short life contained far more in it than is contained in an average long life.

This furnishes a third province of child study, of even greater value than the two already named.

Taking a closer survey of the first province of infant development—namely, in that of sense-perception—it is important to determine with accuracy the data of the first manifestations of the senses of sight, hearing, smell, taste, and touch. A careful consideration of the concrete evidence in each case will throw much light on the proper treatment of the newly born infant.

Careful investigation will fix the average date of the growth of perception from mere sensation—the beginning of the knowledge of objects and the cessation of the period of mere immersion in subjective feelings. Preyer has recorded his sagacious observations on this point.

In the first month he notes: A slight sensibility to light five minutes after birth; pleasure in the sight of a rose-coloured curtain and eyes opened and shut when the child is spoken to (twenty-fifth day); movement of a light followed (twenty-third day); hears whistling (twelfth day); licks sugar

(first day); laughs, opening and half shutting the eyes (fourth week). In the second month he records the pleasure of the child in the sight of coloured tassels (forty-second day); following any bright object with the eyes (seventh week); tones of the piano give pleasure in the eighth week; child utters its first consonant sound, *m*. In the third month shows his recognition of faces (ninth week); begins to notice ticking of watch and discriminate one sound from another (ninth week); turns his head towards sounding object (twelfth week); begins to balance his head (eleventh week), and gains some control of it (thirteenth week).

But Preyer's child does not grasp things with contraposition of the thumb until the fourteenth week, shows conscious will-power in holding up his head not earlier than the sixteenth week, and sits up, his back being supported, in the seventeenth week. It is towards the close of the fourth month that he begins to imitate.

The arrival at the power of imitation marks the beginning of a higher order of mind. Low as it stands in the theory of education, it marks an epoch in the development of the human soul out of the animal. It marks the entrance upon self-conscious education.

In imitation the child notices the activity of another being and recognises that activity as something proceeding from an energy or power akin to the power he possesses. It is analogous to his power at least in some slight degree, for, see, he can produce it himself! Even if it is a steam whistle that he imitates, he feels to some degree

this identity between his power and that of the steam-engine. If it is the action of an animal that he imitates, there is a deeper and fuller identity; if that of a human being, he may add to the external pantomime also the internal feelings and meanings which he interprets or reads into the act of another.

The infant proves to himself the possession of a power manifested in an object of his experience by imitating the action in which he is interested. It is evident, therefore, that imitation is a kind of spiritual assimilation, a digesting and making one's own of the act of another. He is not conscious of his purpose, but he does recognise his act of imitation as a proof of his own power, and, as such, a revelation of his selfhood.

The boy can imitate the sound of a steam-engine, or of a bear, or the voice and manner of his elder brother, of a soldier or a laborer. His imitation is a sort of identification of himself with a part of his environment, and, conversely, a production within himself of that part of his environment and—what I have just now called a spiritual assimilation—the making over or repeating of the environment within the self, and, so to speak, a realization in some small degree of the universality and infinitude of one's human nature, since it is shown to be equal to reproducing for its own behoof what is foreign to itself.

By this act of imitation he becomes vividly conscious of his own causative power as contrasted with outside forces in which he has no concern. Hence, by the act of imitation he grows towards the

feeling of responsibility and arrives at the concept of selfhood or the ego.

The act as performed by another is none of his. The act as imitated by himself is his own and he alone is responsible for it. Imitation is therefore an act of the will.

Imitation is not only important as an evolution of the feeling of and the concept of the inner selfhood, but it is also quite as important as leading to a consciousness of a social whole. For in imitating the deed of another, one adopts an example or model. And in imitating the use and wont of society—its customs and usages—the individual voluntarily makes himself a member of the social whole, and thereby enters institutional life. From being a mere individualist, a mere savage, he becomes a civilized being. He learns how to control himself and emancipates himself from mere external authority. This becomes evident when we consider that imitation is the chief means by which the infant evolves the power of using language.

Contemporaneous with the development of sensibility and the acquirement of perception through interpreting mere subjective feelings by space, time, and causality into knowledge of the environment, arises the reaction upon the external world—the growth of the power to produce an effect upon some portion of the environment and modify it or change it.

Preyer has noted for us many of the steps of this process as he observed it in his boy Axel. In the nineteenth week he noticed the pleasure that his child manifested in crumpling paper, tearing

it, or rolling it up, delighted with the noise made as well as with his own power to determine the shape of an external thing. He made continuous experiments, from the eighth month on, which had for their result and apparently for their purpose, the drawing of the line of distinction between his body and his environment. He experimented with his toes and studied his feet and legs (thirty-fifth week). He grasped at his image in a mirror; turned over when laid on his face (forty-third week); tried to sit without support (fortieth week); attempted to walk (forty-first week); threw down objects and looked at them to see the effect on them (forty-seventh week); noticed the difference in sound made on his plate when struck by his spoon if he damped its vibrations by touching it with his hand (forty-sixth week); learned to interest himself in objects (men sawing wood) a hundred feet away (fifty-first week); learned to carry biscuit to his mouth and to drink from a glass (fifty-second week); struck the keys of the piano (thirteenth month); raised himself by a chair (sixtieth week); took off and put on the cover of a can and became so interested in this discovery that he repeated it till the record showed seventy-nine times (fourteenth month); pulled out and pushed in a drawer, turned the leaves of a book (fifty-eighth week); ran alone (four hundred and fifty-seventh day).

In learning language there are two aids. The child notices some prominent feature in an object and designates it by some imitation of its sound or description of some other feature (Axel called his

nurse *wola* because she was always saying *ya-wol* or *yes-yes*), and his parent or nurse adopts his designation and in talking with him uses the name or word that he has invented. The parent thus interprets the child's rudimentary beginnings of speech. On the other hand, the child is constantly observant of the language of people about him and learns slowly but constantly how to interpret some new word or put some new meaning into a word already familiar.

Preyer records the first word of Axel as *atta*, which he used when taken out by the nurse for his daily walk or ride, and for a variety of actions connected analogically with *going out*, such, for example, as the turning out of a light. His second word was *heiss* (German word for *hot*, used the fifteenth month). In the twenty-third month this word *heiss* is used as a sentence meaning *it is hot*, spoken of his drink and also of the stove.

The appearance of the use of the judgment in speech—the affirmation of a predicate of a subject—marks an epoch in acquiring language, for with predication comes the expression of the exclusively spiritual thought-distinctions of universal, particular, and individual—logical distinctions of infinite importance to the mind, which, however, are not found in Nature (or in the time and space environment of the soul). The predicate is relatively a universal—i. e., as compared with the subject of the judgment or sentence. *The drink is hot* means that the object—namely, the drink—falls under the class of hot objects. One general class may contain many classes less general. Some hot objects

are hot water; some, hot milk; some, hot porridge, etc.; but all these fall under the general class, *all hot objects*, which is the universal, while they are the particular. The particular in logic is indicated by the word *some* or its equivalent. The subject that is not used as a predicate is called the individual or singular in logic. Thus in Axel's first judgment the terms stand as follows: *hot* is the universal; *drink* is the common name for his liquid food, and here it is subsumed (or included) under *hot*, and is therefore a *particular*; lastly, the food which he is holding in his hand and tasting with his tongue, and to which he gives the general name *drink*, is the *individual* that is not predicated.

In this analysis of the mental operation which goes on in the act of predication we find therefore three terms and two acts of subsumption, but they are not all explicitly stated in Axel's first judgment. He says *hot*, omitting *drink* and the copula *is*. Before this he had heard his food named many times, the name *drink* being used by his nurse. As the name indicates a class, it holds in it an implicit judgment: *this object before our senses is drink*. For the general name always implies subsumption not only when predicated of the individual object, but even when assumed of it. The child looks from the window and says *horse* on seeing a wagon drawn by a horse in the road. His full thought expressed in words would be: "Look, nurse, and see! *There is a horse.*" At an earlier stage of learning to talk he might have said *cat*, meaning that he saw a four-legged living and

moving animal which he classified with *cat*, the only animal familiar to him hitherto, and which he had learned to name.

The child is quite frequently applying the names he has learned for his familiar objects to new objects in which he finds any of the features by which he recognises the familiar ones. Seeing a new quadruped, he gives it the name *cat* or *dog*, because he catches sight of the four legs and feet. So the first *cow* or *horse* may be called *dog* or *cat*, or *vice versa*, according to the order of his experience.

The three terms, universal, particular, and singular, are fully expressed only in the syllogism. This (the use of the syllogism) presupposes a far higher degree of analyzing his consciousness than the child possesses. But all the steps are there in the mind, although not expressed in speech.

An infant that I knew, who had been brought up on a ranch and had often seen and heard cows, heard the mellow sound of a distant steam whistle and said softly to herself, *tow* (*cow*). The act of the mind took the form of the second figure of the syllogism (the figure of identification): (a) Cows are objects that make this soft lowing sound; (b) something is making this soft lowing sound; (c) it is a cow. The conclusion *cow* was all that was expressed, but it was enough to reveal the child's mental operation.*

When the infant first begins to talk he uses only single words, and these are name-words.

* See International Education Series, vol. xxxvii, p. 195. Compare Chapter IX of the same work.

After a very little while there begin to be subsumptions of new objects under the name-words that are used for the already familiar objects. Then there begin to be adjectives used so that the mind expresses not only the consciousness of the object, but also of some quality, mark, or other determination predicated of the object—thus forming a complex idea and attempting to express it. Then next there is the expression of more steps in the mental process, the connecting of two judgments, or propositions, causally; as, for example, *dog, bite*, meaning: *this is a dog, he will bite as he did the other day*).

Here is the important consideration that makes the use of language the object of all objects in observing the growth of the intellect in the development of the infant. The act of perception, as expressed in language, always implies that the infant sees each and every object as a specimen of a class, and gives the class-name to it in talking about it. Let the dog be called *Tray*, instead of *dog*, and the child will use *Tray* as a class-name until he gets beyond the expression of the universal and begins the expression of the *particular*. After this he will begin to understand proper names as individual designations.

It is evident, therefore, that the infant thinks of his object as a result, and not as something utterly unique and *causa sui*. A class of objects implies a similar origin to all that it includes: *drink* is the name for the food of yesterday, the food of to-day, and for the food that will be provided to-morrow. In using the word *drink* the child summons swiftly

before it the food-producing agency of the house (the nurse who prepares it, the ingredients that she uses, and the heating operation, etc. — all the contents of his experience on this score), and makes the general word *drink* stand, not uniquely for this particular cup full of drink, and only that, but for this drink, and yesterday's drink, and tomorrow's drink, and for all drinks that are the same in material ingredients (material), combined in this manner (formal cause), for this object or purpose (final cause), and prepared by the nurse or some other person (efficient cause).

The fact that language deals only with general names of objects, actions, qualities, and conditions has been often noted ever since Timon the Sillograph laid so much emphasis on it. But the reason for this has not been so often considered. It involves the reason why intellect is the ruler over the world; why mind knows things in their causes; why it knows a divine Creator as a personal reason.

For language proves that the intellect, even its feeblest beginnings, seizes objects not as absolute and original beings, but as results of a causal process. It ever goes behind the immediate object before it to seize, as well as it may, its cause, and it names not the particular object, but its class; it names not its class as a mere collection or aggregate of similar things, but as effects of a producing cause. Looking towards the beginning of the causal process it sees an Original Cause as presupposed. The very structure of the mind that uses language is therefore theistic and cause-seeking.

Cause-seeking mind seeks an adequate explana-

tion; and adequacy implies all of the four steps that Aristotle named—material, formal, final, and efficient causes. Two of these causes may be known as dependent and two as independent. The dependent are contingent, and are known through experience. They relate to the material manifestation, and concern the material and the form in time and space. Two causes are known *a priori*, and relate to the final cause or purpose and the efficient cause or creative power. The efficient cause is seen by the mind to be necessary, and not contingent or dependent, for without it there could be no power transmitted in the causal series, and hence no effects or phenomena. So, too, the purpose of the whole must be the revelation of the primal efficient cause in its effects, and whatever exists as phenomena in space and time must have its explanation in the final cause or purpose of the absolute efficient cause.

Thus mind has two kinds of knowledge—*first*, of phenomena by aid of the senses and actual experience; *second*, of absolute being.

It would be out of place or far-fetched to consider these two kinds of knowing here in the study of the infant, were it not for the fact that language, dealing as it does in its judgment and syllogism with the relation of the individual, particular, and universal in the process of subsumption—language being everywhere a statement of subsumption—reveals to us the hidden process of thinking, and shows it to be always an attempt to connect its object in a causal series, and always to presuppose an ultimate originating cause, as well as a final purpose in all causality.

The history of the human race reveals everywhere three great primary products of interest and of highest study—namely, religion, art and literature, science. Over against these are the secondary products of its industry in forming (1) civil institutions and (2) the arts and skills that provide for creature comfort and communication.

Child study has to look at its materials as the crude beginnings of these five great interests of humanity.

To base civilization on child study is to make the tree less important than the acorn, the man less important than the child, the race less important than the individual.

The child must be studied in the light of the complete civilization of his race. The prophecies of his greatness are doubtless in him, and may be discovered to a greater or less extent by proper investigation. Certainly, the child cannot be explained by himself without the light of these social products, any more than his first attempts to talk are to be explained except by psychology and logic.

The most important difference between Compayré's treatment and that of Preyer is to be found in the order in which the development of the will is taken up. Preyer takes up in the first part the senses, in the second part the will, and in the third part the intellect. Both agree in presenting first the development of the senses—seeing, hearing, taste, and touch. Preyer treats of the evolution of the will-power in its unconscious beginnings, next of its conscious activity in imitative movements, and finally of its expressive movements, which reach

their completest form in gestures purposely made to express internal meaning. He then takes up in the third part the learning to talk, while Professor Compayré treats of the art of learning to talk before taking up the voluntary activity, and especially the development of the moral sense, which is a matter of the will quite as much as a matter of the intellect. On account of this arrangement, Preyer has made less account of the development of the moral sense than Compayré. Both works end with a consideration of the development of the feeling of selfhood. It is clear that Professor Compayré agrees with Preyer in the view that the child intellect makes language, and not that language makes the intellect.

An excellent point made by Preyer is, that the intellect develops through ideas of space, time, and causality. But one cannot admit that he fully appreciates the significance of these ideas in the intellect. For instance, he does not note the fact that even in the lowest practical use of the ideas of space and time the child perceives the infinitude of extension implied. The child always thinks of any duration as preceded by another duration—that is to say, time is only preceded by itself, and hence is infinite. The infinite is limited by itself, and this is not a limitation, but an affirmation. To be limited in a finite sense requires that something shall be bounded by something else different from it. So in regard to space, the child thinks special limitations as existing in space, and as having an indefinite space beyond them—that is to say, the child shows by his actions that he presupposes space to be in-

finite ; that space is of such a nature as to be limited only through itself. It is the same thing as saying that all its limitations affirm it or continue it.


This twofold idea of the infinite is a most important consideration in dealing with the intellect. Even in the case of the animal his practical dealings with his experience show that this presupposition of the infinitude of space and time is present with him, although unconscious. He acts upon it, but does not become conscious of the form of his action.

Of still more importance than the ideas of time and space is the idea of causality, already adverted to in discussing general terms in language. In the idea of time we have sequence and antecedence—we have succession of one event upon another. But the idea of time does not involve a bond of connection between the antecedent and the consequent. It is causality that furnishes this idea. The idea of cause contains succession—that is to say, separation in time—but it contains besides this separation also the unity of the antecedent with the consequent. For causality regards one being as the originator of another ; a first being furnishes a ground or reason for a second. Causality contains the idea of the transference of one's being to another. The cause sends an influence out upon some other being, modifying it.

An analysis of the idea of cause finds these and other wonderful things in it. The activity of a cause proceeds beyond itself to another, but its activity is its own. There must be origination or else there is no cause. This origination means that

there is an absolute beginning of something. But the beginning is the activity of the cause within itself. The idea of cause, therefore, involves the highest of all ideas—namely, that of self-activity. Take self-activity out of cause and there is left nothing but effect. A bad metaphysics often explains the idea of a causal series as a series in which every link is the effect of the preceding, and no link is the originator of anything new. This destroys the idea of causality, because it makes the entire series an effect and denies origination as belonging to any member of the series. In this the conception is that the causal influence is received and transmitted by the entire series, but that the causal influence comes entirely from outside of the series. The cause in this case is transcendental—that is to say, its originating action is entirely beyond the realm of experience, which deals only with results. The point of interest is, that the ordinary mental operation of connecting phenomena with one another by the idea of cause presupposes a transcendental idea, the idea of self-activity, entirely out of and beyond the causal series.

That bad system of metaphysics also endeavours to get rid of the idea of self-activity. In its analysis of causal phenomena it therefore denies the power to originate to each and every member of the causal series and asserts that the causal influence comes from beyond, but its object in this appears to be the avoidance of the idea of pure causal influence; it thinks to escape the concept of self-activity altogether. In this we see that it has stultified itself, because in eliminating the idea of causality from



the concrete series of events in experience it has reduced them all to effects, pure and simple, and if these effects are without a transcendental cause that originates the influence that is transmitted by the series, then it follows that it is incorrect to describe the members of the series as effects, for surely that which has no cause is not an effect. But without a cause the unity of the series vanishes and there is no connection between any member of the series and its antecedent. One follows another in time, but is not connected with its antecedent by a causal influence. Since no member of the series is a cause, and consequently no member of the series is an effect, the denial of a transcendental cause has resulted in the denial of all causality.

Without the idea of causality, all knowledge, all thought, all science, collapses entirely. There is nothing in any one observation which leads us to inquire for its explanation in another observation. There is no dependence of one thing upon another whatever. The most startling result of this conclusion is the production of a spurious theory of idealism—a result evidently seen by Mr. Preyer, or at least by the philosophic thinkers whom he follows in his theory of the importance of space, time, and causality as the basis of the intellect.

Each sense perception implies, in the first place, a sensation, an act of some one or more of the senses. Secondly, it implies the perception of the dependence of the sensation upon an object outside of it. Without the causal idea no sense-impression could be interpreted as the perception of an ex-

ternal object. The feeling would be entirely subjective. It is unnecessary to mention further that there could not even be a subjective feeling without presupposing the idea of causality, because even a subjective feeling discriminates between a subject which thinks or perceives and the pain or pleasure or other feeling which is its object.

The feeling of the ego and of personality is closely identified with the rise of moral responsibility, which is perhaps even more important than the consciousness of the presuppositions of causality which have been dwelt on here in the discussion of the psychology of language. Philosophical insight comes to the support of the doctrine of morals and religion, and in the long run a lack of philosophical insight will disturb the foundations of both. If the feeling of personal responsibility did not exist in the soul of the infant, he could receive no moral or religious education. We have already discussed some of the phases of this feeling of responsibility. If there were several egos not subordinated to a genuine higher self, and if these egos held sway in the soul one after the other, there would be no common consciousness and no feeling of a pervading personality. The sway of one ego would be opaque or impervious to the preceding and succeeding states of the soul, and what happened during its sway would not be chargeable to the reign or sway of a previous ego or to that of a subsequent ego. Students of abnormal psychology often get into some confusion with regard to what constitutes an ego. The ego is not responsible for the vital processes of the body, except in so far as



it deliberately controls them through some means or agency. What happens during one's sleep, or in a dream, is not chargeable to the ego, so a temporary or even a permanent state of insanity is not considered moral action, and the doer is not held responsible for it.

In the case of what are called diseases of the personality and in which there is a complete lapse of the memory of one's past life and the commencement of a new life—almost the same thing as the wiping out of the pages of one's history and the beginning of a new career—there is often a complete moral responsibility during each life; but the moral relations that are dependent upon the connecting of the present with the past vanish from consideration. The new personality forgets his family ties and his duties as completely as if they had never existed. He forms new family ties, illegal and immoral, but without any consciousness of criminality or immorality. In such cases as these the memory of the past is likely to return at some epoch, and the personality in that case effects a synthesis of its past life with its present one, and the third state of the personality continues both.

It has always been considered possible by a certain school of thinkers that one may in certain exalted states of the mind recover the memory of what had happened to one in a preconscious life. With such a memory there would not be connected a consciousness of moral responsibility. Many of our recollections of childish errors and misdeeds are understood and explained by us as not *im-moral*, but as *un-moral*, as made by us when our conscious-

ness covered a too small portion of the sphere of our practical activity to bring it under the scope of conscience. For we are not responsible for consequences that we did not intend. An infant of three or four years old may fire off a gun that kills a human being, but he is not held responsible for his deed, because he does not understand the causal connections of his deed, and he is responsible only in so far as his consciousness of these causal conditions extend.

The personality is not constituted by memory, but memory is an essential constituent in legal and moral responsibility.

Again, personality is not a consciousness of the body, and must not be confounded with the feeling of self that is possessed by the animal and by the human being before he has developed his intellect and his will. What Preyer calls lower centres—that is to say, those which occasion the three kinds of movements, impulsive, reflex, and instinctive—are not connected with the moral self or the true personality, and consequently are not pervaded with the sense of responsibility.

The sense of responsibility is connected with the checking of the lower centres—those of the impulsive, reflex, and instinctive movements. It has been suggested by an acute student of cerebro-physiology that the white matter of the brain deals wholly with inhibiting the lower centres; and if inhibiting means the shaping of the action of the lower centres, this view seems very plausible. The sculptor inhibits with his chisel the various portions of marble which overlay the ideal form which

he wishes to bring out. The sculptor of character inhibits all activities and all portions of activity which do not reveal the moral ideal. The inhibition is limited to checking the passions, desires, and impulses which reveal an immoral selfhood. The inhibitions of the soul may be thought to develop an organ—namely, the cortex by which the personality acts on the lower centres. What is left to act is only the natural forces in so far as they reveal the moral selfhood. These so-called lower centres of which Preyer speaks—namely, the impulsive, the reflex, and the instinctive centres of motion—are not egos or personalities, but dependent beings, so connected with the body that they cannot well be conceived apart from it.

In bringing forward the second volume of this translation the publishers congratulate themselves on furnishing for that wide class of teachers who are desirous to see the results of child study, rather than interest themselves as experts in the dry details, the work of a writer distinguished for good taste and sound judgment—one who selects for discussion those things which are significant, and discards or passes in silence the insignificant. They believe that a consideration of these topics under the guide of a master like Professor Compayré will be a substantial aid to the work of the school-room.

Miss Wilson desires to acknowledge the assistance of Prof. Félicien Victor Paget for material assistance in the translation of this work.

W. T. HARRIS.

WASHINGTON, D. C., *June, 1902.*

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LATER INFANCY OF THE CHILD

CHAPTER I*

THE EDUCATIVE INSTINCTS : IMITATION AND CURIOSITY

- I. Imitation in the child.—It presupposes at least the perception of that which is imitated.—The imitative movements do not begin until towards the fourth month.—Different examples.—Does the imitation of sounds precede the imitation of visible movements?—Imitative movements are not all voluntary.—Unconscious and automatic imitation.—Yawning.—The contagion of cries and of tears.—Imitation and suggestion.—Conscious but not voluntary imitation.—The child is amused by what he does.—The sense of humour.—Voluntary imitation.—Self-love, the desire to show his strength.—Sympathy, affection.—Imitation of moral acts.—Inequalities of the power of imitation. II. Curiosity in animals.—Curiosity in the child.—Observations of Taine and of Champfleury.—Curiosity shown by looks, by movements of the hands.—The child must familiarize himself with objects before studying them.—Astonishment and curiosity.—Evolution of curiosity.—The child's questions.—His credulity.—Different causes for the questionings of the child.—His curiosity often only mutability of mind.—Importance of curiosity in intellectual education.—Observations of Dr. Sikorski.—The part of curiosity in the education of the will.

THE different faculties of the child, in their development, obey general tendencies, which are,

* This is Chapter IX of the original work.

as it were, the inner energies of the nascent mind: imitation on the one hand, of which it has been said, not without exaggeration, however, that it makes possible the first awaking of intelligence;* curiosity, on the other hand, which is the intellectual appetite, so to speak, the need for knowing, an understanding which, having been started, wishes to grow to maturity. We shall call them, in a word, the educative instincts, because they alone render education possible. Marion says that what is called the capacity of the child results in great measure from the gift of imitation.† It is indeed by virtue of his disposition to reproduce, first, the actions, later, the thoughts and feelings of others, that the child is humanized little by little, that he leaves his barbarism to enter upon civilization. The educative influence of imitation extends to physical actions as well as to moral actions, to the intelligence as well as to the sensibility. The action of curiosity, apparently more limited, since it bears directly on instruction alone, is, however, of no less importance; for it is curiosity that opens the door to ideas, and by enriching and stimulating the intelligence, lays the foundation of the moral sense.

I

To imitate is to reproduce what one has seen others do. Imitation, then, in its most elementary form, presupposes at least the perception of the act imitated. In order that the child should repeat, or

* Egger, *op. cit.*, p. 11.

† *Revue scientifique*, 1891, p. 774.

try to repeat, the gestures and attitudes of those about him, it is evidently necessary that he should have noticed them, that he should at least have seen them. In the same way, to imitate a sound, he must have heard it. Therefore, an intellectual representation, more or less distinct, which will be either a perception, if he imitates immediately what he sees or hears, or a remembrance, if he imitates in a more conscious, more unrestrained way, at a distance—such is the condition of every imitative act.

It follows from this that the motions of imitation, however precocious they may be, do not appear in the child as early as the automatic and the instinctive motions, which result from a sort of motor spontaneity.* Before entering, to a certain extent, into social life by means of his imitative acts, the new-born child simply repeats unconsciously and mechanically the motions suggested to him by the irresistible force of Nature and of heredity. For the first four months, nothing seems to reveal the instinct of imitation, and it is to the period extending from the fourth to the twelfth month that most of the facts gathered by observers relate.

At four months Tiedemann's son made a motion with his mouth, as though tasting something, when he saw any one drink. Darwin says that his little son was not more than four months old when he seemed to be trying to imitate sounds. But Darwin was afraid he had stated too much, and added that

* See Chapter II.

it was only at the age of six months that his son appeared unmistakably to make this effort.

If Darwin's first observation were confirmed, it would tend to establish the imitation of sounds as preceding the imitation of visible motions. And it would seem 'natural that this should be so, for sound is more easily perceptible for hearing than is the representation of more or less complicated actions, of which any motion is composed, to the sight. But, on the other hand, the organ of speech is not yet sufficiently developed at the age of four or five months for vocal imitation to be easily produced. And we believe that Egger's observation may be accepted as a general truth, when he says that he has never noticed any appreciable effort to imitate sounds before the age of nine months.

On the other hand, we do not believe that it is permissible to generalize Darwin's affirmation when he claims that he has not observed a disposition to imitate many kinds of action before the age of eleven months and a half; this disposition shows itself earlier. Preyer saw traces of imitative motions from the fourth month, notably that of the protrusion of the lips—a motion which the child tried to reproduce as soon as he saw his father make it. At about the same time, when the father put the end of his tongue between his lips, the child tried to mimic him. Two months later, he smiled when people smiled at him. Finally, in the tenth month, he imitated certain motions of the hand and of the arm repeated frequently before him; for instance, waving his hand as "Good-

bye." The child looked attentively at the person making the motions, then executed them himself, sometimes very rapidly, but, as Preyer acknowledged, without thinking of giving these purely imitative motions the slightest expressive value.*

Towards the age of nine months, Egger says, the child's instinct of imitation is clearly manifest: first, the action of hiding and of disclosing himself, in playing "peek-a-boo"; second, the action of throwing a ball after having seen some one throw it; third, trying to blow a candle out; fourth, trying to mimic some one who has just sneezed; fifth, trying to strike the keys of a piano.†

Every one has seen many acts of the same kind towards the end of the first year and the beginning of the second year. A child seven months old, seeing his father drum with his fingers on a table or a window-pane, will make an awkward scratching in imitation. A little boy twelve months old will imitate the snapping of the fingers. A little girl from nine to twelve months old, cited by Preyer, imitated, in a most comical way, what she saw her nurse do; she bathed her doll, corrected it, rocked it, and kissed it.‡ Another brushed and combed her hair, after having seen her mother do it. All the actions of every-day life are successively copied by the child with more or less awkwardness. This is how he learns to use his spoon, his fork; how he pretends to read or to write, wetting the end of his pencil;

* The Senses and the Will, p. 284.

† Egger, *op. cit.*, p. 10.

‡ The Senses and the Will, p. 286.

to move his lips as though muttering words under his breath. He is a little monkey, seeing everything and reproducing everything.

But what is more important than enumerating facts, of which the list might be easily extended, is interpreting and understanding these facts. Is it necessary to recognise manifestations of will in the child's mimicries? Preyer is very decided on this point. He says that although an imitative motion may have the appearance of an involuntary motion, when it is performed for the first time, it is nevertheless true that it must have been performed intentionally, that is to say, voluntarily; the imitating child has a will. If Preyer is right, his theory would take us too far, and it would be necessary to put the monkey in the highest rank among beings endowed with will, since the monkey is the most imitative of animals.*

Far from admitting that all the imitative motions of the child are voluntary, we believe that these motions in the beginning are not even conscious. Like all the faculties, imitation passes through different stages in childhood. There is for it, also, a law of three epochs: first, it is automatic, almost reflex, instinctive, mechanically instinctive, at least; then it becomes conscious of what it does: it is exercised intelligently, without as yet being voluntary;

* Aristotle contents himself with noting the power of imitation without seeking to explain it. *Τὸ μιμεῖσθαι σύμφυτον τοῖς ἀνθρώποις ἐκ παλδων ἐστὶ, καὶ τοῦτῳ διαφέρουσι τῶν ἄλλων ζῴων ὅτι μιμητικώτατον ἐστὶ καὶ τὰς μαθήσεις ποιεῖται δια μιμήσεως τὰς πρώτας* (Poetics, chap. iv). Aristotle, then, did not know the monkey, for he calls man the most imitative of all the animals.

finally, it becomes reflective, willed, intentional imitation. But how far the little child is from having attained this last stage of evolution! We say nothing of the fact that even when it has become possible, voluntary imitation will neither prevent nor suppress the play of instinctive imitation.

An able, witty man, who has recently treated of our subject in an unpretentious way, calls attention to this point. "What could be more imperious," he says, "than the influence of those particular spasms called laughter and yawning? Willy-nilly, we are conquered. We obey that impulsive force, which we would gladly repel, at any price. There is here an evident physical influence. If one person looks persistently at one corner of the room, or at the centrepiece of a ceiling, you will soon see those about him looking in the same direction, and finally all will have their eyes directed towards the same point. It is an innocent joke, amusing, after all, which the students repeat from time to time in the college lecture-room." *

Impulsive imitation coexists with voluntary imitation in the adult, but it exists alone in the child. We need not say of the new-born child what Pascal says of man, that he is "automaton as much as mind"; we may say unhesitatingly that he is simply automaton. There is a natural and fatal necessity that compels him to conform his actions to the actions of others, to model himself after the pattern of others; and this without his reflecting; not only without his willing, but without his even knowing

* Nicolay, *Les Enfants mal élevés*, Paris, 1890, p. 271.

it. Otherwise, how shall we explain the contagion of laughing and of crying, not infrequent with children, which heralds the contagion of fear and of cowardliness and those epidemics of hallucinations and visions among adults, of which we find so many examples in history? Preyer himself cites facts that it is impossible to reconcile with the theory he extols, that imitation is always voluntary. He says: "When one enters a room in which there are several babies, all quiet, one can easily find out to what extent crying is contagious. If one child begins to cry, several others will very soon begin it too, then more, until finally the whole band will have joined in."

Will you say that in cases of this sort there is a suggestion rather than an imitation? This is exactly what we believe, that the imitative motions in the beginning are suggested, irresistibly suggested, by a sort of natural hypnotism. There is in example a force of action that is communicated and spread abroad, that attracts and fairly carries away mature man. How much more reasonable that it should act upon the child, whose personality is not yet organized! It is only later, when under the sway of reflection and of will, that example can become a freely chosen and intentionally imitated model. Then the impetus will come really from ourselves, from our intelligent spontaneity; but at first it is from without, from external things, that the inclination to act emanates.

It is true that this external instigation can have its effect only when it finds in the being that it provokes to action a natural disposition, to accept, to

submit to the influence of example. And it is this disposition that constitutes in its first form the instinct of imitation—passive instinct, to be sure—which is only a tendency to receive unresistingly the suggestions of others. In the little child physical and moral weakness, the lack of personal initiative, and the absence of individuality are the particularly favourable conditions that augment the force of example. Having as yet very little knowledge and a very small fund of ideas at his disposal, being powerless, moreover, to act by himself, the child yields easily to outside stimuli; he is at the mercy of the impressions that besiege him on every side. As Fénelon said, “The ignorance of children, on whose brains nothing has been stamped as yet, and who have no habits, renders them pliant and inclined to imitate everything they see.”*

It is not necessary to bring up as an objection against the automatic character that we attribute to the first imitative motions the fact that they are generally clumsy and awkward, and do not present that precision, that immediate and infallible perfection, which characterizes most of the instinctive motions: for instance, the motion of sucking, from the very first days of nursing. When a little child sees a person extend his lips and make a grimace, and then applies himself to imitating this motion, we find that he does it awkwardly, and not very successfully. On the other hand, the protrusion of the lips will be executed with remarkable perfection when it is produced spontaneously in the same

* Fénelon, *De l'Éducation des filles*, chap. iv.

child, under the guidance of an effort of attention or of an inner impression of discontent. This little difficulty will be resolved when we consider that here it is not the motion itself that is instinctive, it is its cause. Instinct has drawn back, so to speak; it is not joined to the same organs, to the muscles that determine the motions of the tongue and of the lips of the child when nursing. It is not circumscribed in such or such special motion. It is a general and deep-seated tendency of Nature, a bent towards imitation, a blind inclination to yield to what is before one, to reproduce any motions whatever; not a special organic instinct, ruling with precision all the details of execution in which heredity reigns as absolute mistress, because the motions depending upon it have been performed thousands of times by our ancestors.

One step further on, and imitation becomes conscious and intelligent, without being, as yet, voluntary. Marion says: "It is a fact that when an act is begun automatically and, as we say, mechanically, will tends to take its part, and completes it. One falls back with the cowards, or goes forward with the brave, at first by pure force of imitation, without the intervention of the will. But one necessarily sees oneself act, and becoming conscious of what he is in the way to do, must either consent to do it or decidedly refuse."* Marion speaks only of the passage from the involuntary to the voluntary; but the evolution from the unconscious to

* De la solidarité morale, p. 181.

the conscious is accomplished in an analogous manner. It is because a child has repeated an imitative movement several times—for instance, that of blowing out a candle—that he comes, little by little, to take account of his own action, to compare what he tries to do, sometimes without success, with what he has seen his parents do. We see him, then, sometimes proud of and rejoicing in his work, sometimes ashamed of it; proof evident that his consciousness is involved, and that his intelligence participates in the action accomplished.

For the most part, the child will show pleasure in his efforts at imitation. Doubtless the pleasure felt in such a case results in part from the satisfaction that the child always finds in exercising his activity, in moving his muscles and his limbs. But joined to this there is something more particular, which proves that the child is conscious that he is making not merely any motion whatever, but an imitative motion. This will show itself above all in the voluntary motions that the child tries to accomplish a little later—for instance, when he puts a pencil in his mouth and pretends to smoke, when he imitates ridiculous attitudes, when he puts his father's broad-brimmed hat on himself. In this case the child shows a characteristic satisfaction which we should be tempted to hail as the first manifestation of the comic sense. He seems to seize the disproportion existing between his child character and the actions of the grown person that he is mimicking. In any case he is amused; he is pleased by the singularity of his gestures and his

poses; he acts a comedy for himself at the same time that he is giving it for others.*

When they have once become conscious, the imitative motions lose no time in passing into the hands of will; when instinct disappears, individuality begins. . By an initiative that belongs peculiarly to him, the child imitates certain actions which he has observed particularly. And these motions, up to a certain point, presuppose will in two ways: they presuppose it at first in the attention accorded by the child to one action, in preference to all others; they presuppose it, too, in the little effort that he makes to reproduce this action, in the intention, more or less deliberate, that directs his motions, accomplished as they are from now on in the knowledge of the cause and in the prevision of the end to be attained.

It is still more true in the case of the child than in that of man, that will does not exercise itself alone. Will, the absolute power of deciding for oneself unaided, if we make an abstraction of every desire, of every feeling, is but a metaphysical entity. Nevertheless, when the child wills to imitate, he is guided by the different inclinations of

* Compare Mme. Necker de Saussure (*op. cit.*, II, chap. iv). "From sympathy comes a tendency to imitate. After having felt as we feel, the child wishes to act as we act. He believes that he can do what he sees us do, and his attempts, at once pleasing and awkward, are to us a source of great amusement. We make them an object of pleasantry, while with him they are the effect of a serious desire, which we soon succeed in perverting. Natural efforts at imitation become premeditated, almost affected, when they continue to amuse us."

his nature: self-love, the desire to show his strength, sympathy.

In the first appearance of imitative actions, it is evident that the child reproduces by preference the simplest motions, those that require the least effort, those that correspond to the motions which, in the beginning, he accomplishes automatically or instinctively. But there comes a time when, on the contrary, the child delights in the most inconvenient imitations, when he selects difficulty, when, by a sort of vanity and childish vainglory to show his strength, he chooses as models those who are stronger and older than himself. He loves to increase his stature, so to speak, and to play that he is a young man. He has all the ambitions, and pretends to do everything that is done before him. Marcel is two years and two months old; whenever any one says before him, "I am going out," or "I am going horse-back riding," the child replies immediately, "I am going too." There is here a visible beginning of emulation—the emulation that wishes to equal, if not that which aspires to surpass.

Let us not forget, on the other hand, that even in voluntary imitation the force of suggestion and of instinctive imitation always plays a part. If the child imitates those who are skilful, more experienced than he, it is not only because he has the secret ambition to raise himself beyond his present state, to anticipate the future, nor because he wishes to do more and to do it better than he normally and naturally can; it is also because he is captivated, charmed, fascinated, by the example of those who have more strength, more authority than he has

and whose actions stand out in bolder relief. I have known families in which there were two brothers, the older having the weaker, more effeminate character, while the younger had, on the contrary, a very strong, energetic nature; it was always the older that conformed more readily to his brother's actions, whether in their plays or in conduct in general.

We are careful not to omit in giving the auxiliaries of imitation, sympathy in its two senses, either as the faculty that makes us participate in the troubles and sufferings of others, or as the inclination that draws two people together and inspires them with a mutual affection. Under the first form, sympathy is really nothing but imitation, a moral imitation, since it is but the secret need of putting our feelings and our thoughts in accord with the thoughts and the feelings of others. The child that cries when he sees others cry, becomes sad when his mother is sad, is really only imitating. In the same way, sympathy, considered as a natural and instinctive affection, is a principle of imitation. It is the comrades whom he likes, the brothers and sisters whom he loves, that the child will imitate most of all. To love any one, is this not in part a wish to resemble the object of our love?

Imitation, which at first bore only on material things, which reproduced simply a few elementary movements, such as putting out the hand in salutation, later more complicated motions, as throwing the arm around a person's neck in an embrace, rises, little by little, to moral things, and becomes the essential means of education. This will be so, above

all, when it can found itself on esteem or on admiration. But we must not as yet expect of the child this ideal imitation, such as moralists describe or artists practise. It is motives of another order that inspire the imitation of moral virtues or of æsthetic beauties in the first years; it is, as we have seen, the tendency to sympathize with others, to act as they do, or the pretension of doing as well as they do; it is sometimes, also, the desire to distinguish oneself. The proof of this is that the child shows himself equally disposed to reproduce the good and the bad, the beautiful and the ugly; neither taste nor conscience has as yet appeared.

There can be no doubt, moreover, but that the power of imitation, as that of all the faculties which are not purely instinctive, varies with the temperament, with the nature of each child. It is easy to see some of the causes of this inequality. The first is the strength or weakness of the organs; according as the child is vigorous or puny, he will have a greater or less tendency to imitate the motions, the actions that he sees about him, so that even in the most instinctive imitations, the energy belonging to each individual shows itself. The lazy child will be lazy in imitating others, as well as in acting by himself. Another cause is the degree of activity of the intelligence; a gifted child, whose attention is awakened very early, will surpass his comrades in his imitative zeal, either because he has noticed more, or because he has taken account of the motions and operations necessary to repeating the action. In this case, imitation evidences, above all, the force of the intellectual temperament. Later,

it is true, things will change, and those children that remain imitators will be the ones that have the weakest personality, the least individuality, and consequently find it more convenient, in their indolence, to continue to imitate others instead of acting and thinking for themselves. Excellent as it is in the first years, since it teaches the child all that he needs to know and to do in order to be in touch with his fellow creatures, to enter into the current of humanity, imitation becomes later a dangerous evil, as a school of servile docility in which originality has no chance to blossom out.

But although it may be wise to distrust the effects of an habitual imitation, in so far as it concerns the education of the personality, it is impossible to ignore the fact that the advantage of its action is, in little children, in proportion to its strength. Who does not know that the child who has brothers and sisters is easier to teach than the one who has none? If alone, he does not think of trying to use his legs, or, from another point of view, of exercising his judgment or his imagination as soon as if other children are with him. The reason that school education has always been in repute is not only that it is a social necessity, but that example is necessary to stimulate the activity. The more extended the field opened out before the child's observation, and consequently before his imitation, the more quickly his intelligence will develop. Let us admit that instinctive and unconscious imitation indicates a lower degree of mental development. Darwin tells us the tendency to imitate is especially strong in savages. Note also that

in certain morbid states of the brain this disposition is exaggerated in a singular way. Hemiplegics and other unfortunates afflicted with softening of the brain imitate every word they hear, every action and gesture they see, without having any consciousness of it. If, however, under this first form, imitation is the characteristic of an inferior state or of an exhaustion of moral evolution, the case is a very different one when we come to intelligent and more or less voluntary imitation. Let us remember what Romanes says in his book on the mental evolution of animals: "As the faculty of imitation depends on observation, it is found in greatest force among the higher or more intelligent animals."*

II

The question whether curiosity belongs exclusively to the child, or whether it shows itself in animals also, is an interesting one. The most recent observers of animals—Romanes, for instance—do not hesitate to declare themselves on the affirmative side. But it is difficult to take Romanes' statements as serious when he declares that it is by a curious desire to examine a new, striking object that certain birds are attracted towards a light—for example, towards a lighthouse—or that certain insects fly towards a lighted torch and burn themselves.† The fascination of light, the charm of a brilliant object, will suffice to explain these instinctive actions of animals. It is not impossible, however, to discover in

* Romanes, *Mental Evolution of Animals*, 225.

† *Op. cit.*, p. 279.

the dog, for instance, and in the monkey, too, traces of real curiosity. We have seen dogs six months old leap upon a chair to look out of a window to see what was going on in the garden. In the same way, Darwin found that the apes of a menagerie, in spite of the instinctive terror that serpents inspired in them, could not resist the desire to satisfy their curiosity, from time to time, by raising the covers of the boxes near them in which the reptiles were confined.*

If the intelligence of animals, the limited intelligence, doomed to be held prisoner by instinct, is capable of curiosity, how much more reason that the child's intelligence, destined by nature to a long evolution, and having everything to learn, should show itself curious from its first awakening! Curiosity is the mind in quest of knowledge, which, starting from nothing, claims everything. Curiosity is, then, the characteristic of human intelligence, which is, in great part, the work of experience and of labour. It will show itself from the first months, with the first glance brought to bear on things, with the first movement of the hands to seize and feel a thing. It will accompany the exercise of all the senses. In its first manifestations, moreover, it will not be, as yet, the need for knowing and understanding; to know and to understand do not belong to this first period. It will be simply an avidity for new sensations, a perpetual quest for different perceptions, a sort of intellectual motor activity, the child's mind not being

* Darwin, *Descent of Man*, p. 72.

able, as yet, any more than his body, to remain in place.

That is to say, we should not see in the curiosity of the first months a sort of scientific instinct, an imperative and exclusive need for experimental observations, as Taine and Champfleury appear to have done in two passages, otherwise charming, in their studies on childhood. "Every one may remark," says Taine, "that beginning with the fifth or sixth month, for two years or more, children employ all their time in making experiments in physics. No animal, not even the cat or the dog, makes this continuous study of all the objects that are within his reach. All day long the child I speak of (twelve months old) feels, turns, drops, tastes, experiments upon everything that falls into her hands; whether the object is a ball, a doll, a rattle, a plaything, as soon as it is known she leaves it; it is no longer new, she has nothing more to learn, it no longer interests her. Pure curiosity, physical need, appetite, have nothing to do with it."* No, assuredly the physical appetites are not the only cause of these motions and of this activity of the child, of these sudden likes, followed by as sudden dislikes, in which the special needs of the intelligence are already showing themselves. But it would not be less inexact to take them as signs of some precocious tendency to pure speculation, and to consider children as professional experimenters, when they simply desire to move, and are ever anxious for change; after a few minutes of repose

* *Revue philosophique*, 1876, vol. i, p. 7.

or of diversion, they take their best-known playthings again with as much pleasure as at first.

In a charming chapter of his book, *Les Enfants*, Champfleury has not guarded against this exaggeration, either, when he shows how spontaneous and keen is the child's need for observation. "It is not by pure caprice," he says, "that the child constantly extends his hands towards objects out of his reach, and cries when he is refused them. At the age when he has need of laying a foundation for his knowledge, his eyes do not suffice to enable him to appreciate the angles or the contours of these objects; the child wants to feel them. . . . Breaking his playthings depends upon the same system of observation. The child is anxious to know by what mysterious power the doll closes its eyes, how the toy sheep bleats, by what means the horse rolls over: this is why he has broken his playthings from the beginning of humanity, enriching, doubtless, our glass cases of little clay dolls, without arms or legs, in antique museums."* Here, too, while admitting that curiosity has its part, we must give due place to the instinct of motion, which sometimes translates itself into a need for destruction.

Childish curiosity, moreover, does not exercise itself immediately with the freedom, the boldness that will characterize it later. Before the child comes to the point of desiring to know things, he begins by being afraid of them and turning away from them. Everything new frightens him, and he shows that at first he is divided between a desire

* Champfleury, *Les Enfants*, 1871, p. 226.

to understand objects and a secret feeling of fear. We can see in him several traces of what modern writers call "neophobia," of "misoneism," which the Italian anthropologist, Lombroso, arbitrarily presents to us as the absolute law of the human race, always quick to be frightened at new things, but which is in reality only a passing moment, an accident, whether in the life of humanity or in the life of childhood. In the new-born child, indeed, the tendency to inactivity does not long dominate the natural need for action. As soon as the child has become familiar with things, and the first moment of surprise is over, he studies them with a naïve curiosity that does not stop short of indiscretion. And the more frightened he is at first, the more inclined will he be afterward to observe on all sides the object that has struck his imagination so forcibly.

Astonishment is, in a way, the starting-point of curiosity. Even in the adult, everything surprising or unusual excites a desire to understand and to account for it. The child, then, to whom everything is new, will be curious about everything. At the very beginning, however, his curiosity will be brought to bear upon the people or the objects that relate to his first needs, his first emotions, especially on all that concerns nourishment. Doubtless it will follow the intellectual perceptions in their development, as they extend the horizon of the mind little by little, but it will obey, above all, the progress of the sensibility. It will fasten itself upon all that the child likes, by interest and egoism at first, by sympathy later. Perhaps the first evident manifes-

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tation of childish curiosity is produced when the child passes his hand over the different parts of his body and takes account of his own little person. Afterward it will be the toys, the different utensils of the domestic life, and animals that will particularly attract the curiosity of his eyes and of his hands.

Confined at first to the simple observation of the nature of familiar things, analogous to the work of examination performed by a new tenant in the house he has taken, curiosity very soon passes the limits of personal interest. The child of two or three years looks at everything, listens to everything; his investigating eyes ferret out all the corners. Moreover, as soon as he understands the meaning of words, nothing in the conversations he hears escapes him. When he can talk, he takes part in everything; he becomes inquisitive and wants to know everything. Nor is it only by his perpetual questions that he will show this curiosity, ever on the alert.* One of the results of scientific curiosity in the grown man is to be found in collections; the child makes them, too, in his own way. Beg a child of three or four years of age to empty his pockets before you; nothing could be more amusing than the display of this jumble, where he has packed away, pell-mell, all sorts of objects; partly, no doubt, because he wanted to appropriate them, and have them at his disposal, but partly,

* It is a question to be decided as to when the child becomes capable of asking questions. Preyer says in the twenty-eighth month. Pollock finds the first question in the twenty-third month.

also, from curiosity, to study them at his leisure, by the same sort of mania that we see in collectors of curios.*

To understand things is not only to know their qualities, but also to understand their origin and their purpose. Under this second form, also, curiosity appears in the little child; for instance, when he turns his head to see where a noise comes from, when his eyes follow a bell-cord that has been put into his hands until he sees where it is fastened to the ceiling. Curiosity will not show itself in all its force, however, until the child can talk and multiply at will his "hows" and his eternal "whys."

The child would become really tiresome, a veritable bore, by his incessant questions, if his credulity did not equal his curiosity, if he were not as much disposed to accept the first explanation that comes as he is to ask for an answer. The nascent intelligence is contented with little. Everything is a problem—material for question; but anything will pass for a solution. Notice, in the first place, that many of the child's demands are simply to know the names of things. "What is that?" often means "What is the name of that?" And

* "The pocket, that is to say, a region dear to him (the child) in which he collects his treasures: pieces of wood, peach-pits, ends of pencils, nails, buttons, no matter what. It is here that his life, moral and physical, leaves a palpable trace of his thoughts and his acts. All these little nothings have been a cause of joy and of interest. Each one of them has taken an instant of his life, and represents a dream." (G. Droz, *L'Enfant*, p. 217.) We ought to add that the pocket is the image of the fickleness of the child's tastes.

when once the name of the object is known, the child stops, happy in his little knowledge, having added a new word to his poor little vocabulary. When, a little older, he really asks for an explanation, and, being directed already by the great laws of causality and of final purposes, his little reason wants to know what an object is used for, or how an event has happened, it is necessary often but to give him one word for another and he will declare himself satisfied. The most commonplace *because* will satisfy his most imperious *why*; the most futile reasons seem solid to him. Just as a ravenous appetite is not disturbed by the quality of the dishes served to it, so the child's curiosity, in its credulous avidity, is satisfied with all the proofs and all the explanations offered it. And it is just because it is so easy to abuse the naïveté of childish intelligence, to lead them astray by careless answers, to throw them consequently into all sorts of prejudices and superstitions, that parents ought to be very careful in their choice of explanations furnished their children. It is committing a crime of high treason against innocence to amuse oneself by deceiving a child. When it is impossible to respond seriously to his ill-timed and inopportune questions, it is better to answer simply, "I do not know," or "You cannot understand that at your age," than to play upon his good faith by telling him what is false, or by talking idly and foolishly to him.*

* It is interesting to notice that the facility with which a child asks questions and receives answers to them has much to do with the development of his curiosity. It has been found that in deaf-mutes curiosity does not develop in the same degree as in the nor-

If the child's curiosity does not seem to be scrupulous in the matter of accepting explanations, it is not only because he is ignorant, and consequently credulous, it is also because his wavering, changeable thought cannot fix itself as yet. "The child never *insists upon* objects; he leaves them as easily as he takes them; he has forgotten his own question before you have finished answering him."* I have got out of the embarrassment more than once, when my children have asked a difficult question that I could not answer, by turning their imagination towards other subjects. Sully makes the same remark: "The feeling of ignorance is not yet completely developed in the child; the desire to know is not sustained, is not fixed on each particular object by a sufficiently definite interest; so that parents will often find that the thought of the little questioner is already far from his subject, and that his imagination is marching along to something else, even before the answer has been given him."† In this case it is apparent that there is fickleness in the mind rather than real curiosity, if we understand by curiosity the scientific instinct that does not rest until it finds the explanation sought.

In the inexhaustible prattling of the questioning child mere chattering plays a large part. The child questions simply for the sake of talking, of showing his little powers of oratory, just as the birds sing

mal child, simply because the deaf-mute cannot ask questions. There is a correlation between the inner tendency and the possibility of the outward expression of this tendency.

* Dictionnaire de pédagogie, article CURIOSITÉ.

† Handbook of Psychology, p. 401.

and chirp. There is, finally, as Bain has observed, "spurious curiosity." He says: "Frequently it is a mere display of egotism, the delight in giving trouble, in being pandered to and served."* The child's demands result sometimes, it is true, from the need of not letting himself be forgotten, in order to make a place for himself among those about him; sometimes, too, from a sort of petulance and teasing humor, in which the disinterested desire to know does not play any part. The desire or the need to know is, nevertheless, the essential principle of childish curiosity, whether it shows itself in personal investigations or whether it expresses itself in questions. The child has more or less of the feeling of his own ignorance; in any case he is ignorant, and he naturally aspires to filling up, day by day, the gaps in his knowledge. In the society of men, the questioner, who is often so intolerable, is doubtless above all a curious person, but he is also an ignorant person, who hardly ever thinks for himself, and who is obliged to resort to the reflections and knowledge of others. The child, in the destitution in which he finds himself, draws in the same way upon the knowledge of his parents and of his teachers.

Curiosity, then, is the great instrument of intellectual education. It renders possible both the transmission of knowledge and the heredity of knowledge; it suggests to the child, also, personal research and observations. All is not frivolous and without value in the curious preoccupations of very

* Bain, *Education as a Science*, p. 90.

little children. Because the mind is not yet confined by the habits of routine that school education will suggest to them, their unforeseen questions are sometimes of such a nature as to tax the thoughts of reflective men. "I think," says Locke, "there is frequently more to be learned from the unexpected questions of the child than from the discourses of men, who talk in a road, according to the notions they have borrowed and the prejudices of their education." *

But it is not only from the point of view of the instruction and cultivation of the mind that curiosity plays a large part; a psychologist physician, Dr. Sikorski, thinks, and with reason, that it is an important element also in the education of the will. The moment that the child is divided, so to speak, between the preoccupation of hunger and the need of observing, of knowing, that moment, he says, has a high pedagogical significance. There is, as it were, a struggle that begins then between the two parts of our nature, and little by little the intellectual instinct drives back and retards the manifestation of the physical appetite. "When a child has been very much occupied and has been furnished with a great many impressions that have engrossed his attention, hunger will be longer in showing itself than it ordinarily is; it is true that in revenge it breaks out suddenly, violently, accompanied by crying." †

Dr. Sikorski feels authorized by this observation

* Locke on Education, Cambridge, 1892, p. 108.

† *Revue philosophique*, 1885, vol. xix, p. 54.

to recommend "systematic exercises," the practical devices that he has employed himself, in order to teach his children to overcome their impatience to eat. "Every morning," he says, "the milk was heated on a spirit-lamp, in the child's presence, and this for pedagogical reasons. The operation of the boiling of the milk and of its cooling, which takes from fifteen to twenty minutes, offered the child an instructive amusement, and accustomed him to repress the sensation of hunger. Children to whom the milk is brought all prepared do not know how this preparation is made, and demand imperiously that their breakfast shall be served as soon as they awake." It seems to us that in this case Dr. Sikorski carries too far his constraint and forced attention. I do not know whether all children possess, as his do, this particular gift of patience, which would allow them to bear without irritation the waiting imposed upon them. But the observations of the Russian psychologist are none the less interesting, and they prove that one can, to a certain extent, sustain the attention by exciting curiosity, and in that way train the child to govern his desires; that is to say, to exercise his will-power.

CHAPTER II

JUDGMENT AND REASONING

- I. Judgment in the child before the acquisition of language.—Judgments that are only associations, either of like remembrances or of different remembrances.—Judgments that presuppose a comparison between two states. It is the sensibility; it is, above all, a need that calls out the practical judgments of the child expressed by his actions.—Every clear perception is a judgment.—The child's attitude in acquiring the association of ideas, whether spontaneously or by suggestion.—The first manifestations of reasoning. Employment of means to an end.—Seeking for causality. II. Judgment during and after the acquisition of language.—Very clear judgments expressed by incomplete propositions.—Verbal insufficiency corresponding to a faulty analysis.—Judgments of being.—Judgments of relation.—The first judgments are individual.—Negative judgments. III. Transition from judgment to reasoning.—Inference of one fact from another.—Different stages of induction.—Reasonings by analogy.—The child in reasoning does not go so far as to deduce general or universal propositions.—The notion of causality.—The part of education in developing the notion of cause.—The *why* of the child.—The notion of finality.—The beginnings of reason.—Space and time. IV. The weaknesses of the child's intelligence.—His apparent ingenuousness often only clumsiness of expression. Causes of intellectual weakness in the child: ignorance, confusion of ideas, trifling associations.—Mutability of impressions.—Hasty judgment.

I

THERE are two very distinct periods in the development of judgment and of reasoning: the first

before the child can talk, the second beginning with the moment that he understands the meaning of words and begins to know how to use them. But in the one and in the other the nascent powers of judgment and of reasoning have this common characteristic: they are not yet faculties of reflection; they proceed from a sort of natural spontaneity. The judgment and the reasoning of the child are almost always lacking in reflection. We feel that there is no effort there, and this fact is at once the weakness and the charm of these first attempts at thinking. Doubtless, it is through language that intelligence frees itself, that thought can analyze itself. The use of speech, however, is not necessary in order that judgment and reasoning should begin to be active. And if, in the adult, thought is only an inner speech, words having become through habit the instruments of intellectual work, it is certain that in the child thought precedes and alone makes possible the acquisition of language.

Most of the actions, the movements, and the gestures of every little child show that he has formed judgments in his way. He smiles at his mother, he recognises her; this implies the essential elements of judgment: the image of a person, the remembrance of having seen her before—that is to say, the beginnings of ideas—moreover, the affirmation that this person is present, that the child knows her and does not confound her with any other person. When the nurse starts to walk with him the child makes the gesture of taking hold of the door; he judges that it is through that door that he is to go out. When frightened before a stranger, he presses

himself against the breast of his nurse; he must then be conscious of the fact that a person whom he does not know has presented himself to him for the first time. He refuses one kind of food, he clamors for another—proof that he distinguishes between them. He turns away from the fire because he knows that fire burns; because, at least, he remembers that the fire has burned him once. Thus a throng of judgments, like flashing lights, pass through the brain of the child. He notices the disappearance of his nurse or of his parents; he calls for them with loud cries, he greets their return with transports of joy. He recognises the fact very clearly if one of his playthings is gone. Preyer tells of a child, six months old, from whom they could not take one of his ninepins without his noticing it; the same child, when eighteen months old, could tell very accurately whether or not he had his full number in a game of ten animals.

In the examples that we have just enumerated there appear several distinct steps in the progress of intelligence. In the first case there is only an association of remembrances absolutely alike. The child has noticed his mother's face, or his father's face, those faces which, as far as white spots and pink spots and two bright eyes are concerned, as Helmholtz says, make up a whole easy to remember. He sees them every day. Like images succeed each other, and one calls up the other. There is here only an association of visual images, which memory has held and which are grouped to form notions wholly sensible. In other cases there is still an association of remembrances, but of easily

distinguished remembrances. The child, in seeing again a known image—the door of the room, the flame of the candle—remembers the consecutive events which in preceding experiences accompanied the appearance of these visual impressions—the walk, the burn. And he expects the repetition of these events by a sort of spontaneous induction.* Finally, in the last examples cited there is something more: there is, in the absence of the person, of the object, the feeling that this person or this object is lacking; there is the recognition of their absence, called forth by the child's need of their presence, a veritable comparison between the two states, the one past, the other present, with the strong desire that the past state should recur.

In these associations of remembrances, which are the foundations of the child's judgments, and which may take on so many different forms, it is the needs, the inclinations, that most often call forth the intellectual phenomena. The child becomes intelligent little by little only because he is already a sensible being, because he has appetite, affections, little passions. When we are grown up we can, up to a certain point, act by thought alone; but this abstract work of pure intelligence does not belong to the child. In his case sensibility almost always excites intelligence. Each one of his remembrances is, so to speak, under the control of a

* Romanes, in *Mental Evolution of Animals*, defines this kind of judgment exactly in saying that there is here such an association of ideas that the presence of a perception leads to an inference of the complement of this perception, or to the inductive anticipation of a future event.

need, of a sympathy, of an affection. So the need of nourishment and the taste for dainties being what they are in the case of the child, we ought not to be astonished to find that his intelligence develops first in the acts associated with taking his food. Preyer gives several curious examples of this. A child ten months old, having found that after nursing a long time he could get only a few drops of milk, placed his hand on the breast of his nurse and pressed it vigorously,* probably a recollection with a practical application of a chance experience which had shown him a relation between the compression of the breast and the more or less abundant flowing of the milk. Ten months later the same child, seeing on the table a box, from which on the day before some one had taken a cake to give to him, made the motion of asking for another cake. And another day, when he was twenty-one months old, having eaten a biscuit that his father had taken from the pocket of a coat hanging in the closet, he went directly to the closet to find a second biscuit in the pocket of the coat.

If the child's intelligence does not show its nascent activity very often during the first months, it is because a solicitous education, by the minute care with which it surrounds him, dispenses with all effort, with all quest; it is because his wishes are foreseen, often even satisfied, before they have had time to appear. In spite of his extreme physical weakness, if he were more often left to himself, if his very weakness did not impose on parents

* Development of the Intellect, p. 10.

the obligation to spare him every effort, the child, under the discipline of necessity, would much earlier show himself to be intelligent, inventive, and industrious.

Moreover, it is of course true that, beyond the judgments of which we have given examples, and which presuppose more or less a comparison, conscious or unconscious, of several remembrances, of several successive perceptions, the child performs an act of judgment, shown by the very fact that he perceives, that he uses his senses. Every clear perception is a judgment. As soon as the consciousness distinguishes an object, it judges, it discerns, it "discriminates," according to the expression of English psychologists; it says that this object is what it is, that it is not another; it applies the logical principle of identity. "The first ray of light that enters the child's eye, and the first drop of milk that falls on his tongue," says Rivarol, "give rise to the first judgment, since he knows that the one is not the other."

When we treat of the intelligence of children before they can talk, we have to resort to a comparison with what occurs in animals. The animal, in effect, remains all its life what the child is for a few months: a relatively intelligent being that does not talk. It is easy to find a young dog making judgments, practical inductions that bear a certain analogy to the intelligent acts of the child. The dog quickly learns to scratch at the door to have it opened for him, or to conclude that breakfast is about to be served because he has heard the bell that always announces that fact. There are, how-

ever, sensible differences at the very outset between the intellectual state of the child, who is to become a man, and that of the animal, which will be forever imprisoned in the circle of the same actions, in the narrow limits of an intelligence more instinctive than reasoning. According to Darwin, the difference will consist, above all, in the greater receptivity of the child. He says that the aptitude for acquiring associations due to instruction and those that are produced spontaneously seems to him to be the most marked difference between the mind of the little child and that of even the most intelligent grown dog. He tells the story of the pike that threw itself with such force that it was stunned against a wall of glass that separated it from some gudgeons; during three whole months the pike continued to make the same attempt, with the same lack of success. The greater aptitude in forming an association of ideas, whether spontaneously or by suggestion, is indeed one of the reasons that explain the progress of the human intelligence. The child lends himself quickly to instruction, whether by the results of his own experience or by the lessons that are given him, and that even before reflection comes in. We might say that the education of judgment is only the direct consequence of a great many observations, gathered and preserved by memory.

In some of the simplest judgments that we have cited above there already appeared a certain inductive force, an inference from a present perception to that which usually follows it, the inference from a premise to a conclusion resulting from it.

But even before the child begins to speak, we can find traces of more complicated reasoning. Here are some examples. Darwin says: "When my son took my finger and tried to put it into his mouth, his hand prevented him from grasping it and sucking it. But on the hundred and fourteenth day, after having accomplished this motion, he slid his own hand over in such a way as to be able this time to put the end of my finger into his mouth. This manœuvre was repeated several times. Evidently it was not the result of chance, it was an act of reason." Here the reasoning shows itself in a studied combination of movements, in the adaptation of the means employed to the end accomplished. The child understood what caused the hindrance, and he succeeded in removing it. The same child, at five months,* as soon as his hat and cloak were put on, became disturbed and fretful if he was not taken out immediately. An association was formed between the idea of his clothing and the idea of the walk; and by a real induction the child concluded that the hour for going out was at hand, since they had put on his clothes for the occasion. "When, on the eighty-first day, I rubbed with my wet finger a tall drinking-glass, and produced high tones new to the infant, he immediately turned his head, but did not hit the direction with his gaze, sought for it, and when it was found, held it fast."† In this

* "It is in the second quarter of the first year," says Dr. Sikorski, "that the first germs of consciousness and of the process called reasoning appear." (*Revue philosophique*, 1885, p. 406.)

† *The Senses and the Will*, p. 47.

example, the child's reasoning is a real search for causal activity.

The following observations are of the same kind: "In the twelfth month the child was accustomed, almost every morning, to observe the noisy putting of coals into the stove A. On the three hundred and sixty-third day it took place in the next room, in the stove B. The child at once looked in the direction of the sound, but as he discovered nothing, he turned his head around nearly one hundred and eighty degrees, and regarded the stove A with an inquiring gaze: that stove had already been filled."* In this case, also, to an association of ideas between an auditory impression—the noise that the coal makes in falling—and a visual impression—the stove being filled—is joined a more or less vague notion of causality. It is by virtue of the same principles that Doddy, when he was six months old, and was looking smilingly at the image of his father reflected in a mirror, turned suddenly to look at his father if the latter made a face.

We might multiply analogous examples. At six months, Marcel watches attentively the shadows cast on a white wall by movements of the fingers. He follows them with his eyes, but turns frequently to look at his father's hand.† Is this simply mobility of the eyes and of the glance? Is it not, rather, the need of explaining things, of finding the cause

* *The Senses and the Will*, p. 88.

† Compare Darwin: "At nine months and a few days, my son learned for himself that when a hand, or any other object, projected its shadow on a wall in front of him, he must look for the object behind him."

of what is observed? The same child, at almost the same age, if the end of a bell-cord was put into his hands, followed the cord with his eyes up to the very ceiling, trying to raise his head still farther. Is this simply a glance prolonged? Is it not, rather, a thought being sketched, the thought of seeking the principle, the origin of what is seen? At twelve months, at fourteen months, there is no longer any doubt; the child will reason in a very apparent way. At fifteen months, Marcel, who can walk, is playing with a balloon in the dining-room. Suddenly he shows a desire to go towards the closed door, and seems to have forgotten his plaything. I cry out at his lack of constancy. Not at all; the child indeed does go towards the door, but it is to open it, then to return to the balloon and to push it with his foot through the open door. Doubtless, in this example, as in all those we might cite, there are neither abstract principles nor general ideas; there are only sensible notions and particular facts. But what matters the kind of material for the reasoning? The logical force is there none the less.

II

Reason is the worker, language is the tool. The worker is perfected only because the tool itself is arranged and organized. And there is here between the function and the organ such a dependence, such a close relation, that language could not be formed without this minimum of thought which the child develops spontaneously; and that, on the other hand, reason could not attain to its

maximum development if language did not come to its aid.

When the child begins to speak we should not expect from him all at once an exact and rigorous expression of his thought. His judgment is very clear, very decided; but, because of the insufficiency of his language, he does not arrive at a complete proposition provided with all of its grammatical elements. Thus the child will habitually suppress the verb *to be*, the word *is*, which is the sign of affirmation, the logical copula of two associated ideas. The substantive verb is the abstract verb *par excellence*, and the child, who still manages abstractions only with difficulty, usually prefers the attributive verbs, which are, in a way, the concrete verbs. Deaf-mutes do the same; they will invent, for example, the verb *to naughty*, and will say *Paul naughties*, instead of *Paul is naughty*. And in this the child's language reproduces what we find true of primitive tongues, which, in their synthetic tendencies, ignore or neglect the substantive verb.* In other cases he contents himself, in his naïve sentences, with a simple juxtaposition of the subject and the attribute: *Paul good*, *Paul bad*; or he uses a verb with no personal modification: *Paul cry more*, *Paul disobey more*.

* "In primitive languages the logical form of the proposition in three parts is sometimes represented by two terms, sometimes by a single one. The simple juxtaposition of a noun or of a pronoun and an attribute is enough to constitute a verbal form; several tenses of the Sanskrit conjugation, of the Greek conjugation, contain only two elements, a radical attributive and a pronominal." (Egger, *op. cit.*, p. 48.)

Whence comes this inaptitude or this disability on the part of the child to use the logical copula, the monosyllable *is*, although it is so easy to pronounce? Maillet claims to see in this the proof that the personality of the child is still very little developed, and that, in consequence, he hesitates to bring it in, to implicate it, as the adult does in his affirmations.* The same author adds: "The experiences of the child are not yet sufficiently numerous to give him confidence. Even in affirming he seems to be continuing his inquiries and his questions." It seems to us that this is very inexact psychology, and that the contrary is true. Precisely because he has as yet little experience, the child is very affirmative in his judgments. For the rest, we know that a positive and presumptuous judgment generally coincides with ignorance. It is the minds most limited in their knowledge that show themselves most entirely the most absolute in their affirmations. Doubt and indecision result only from an abundance of ideas. It is with full assurance and perfect conviction that the child gravely expresses his little judgments: "*Baby nice, Little sister bad!*"

No, if the child's propositions are incorrect, and they are, it is not from a lack of energy in the affirmation or in the negation; it is, in the first place, a case of verbal inexperience, which is common to all those in whom education, in point of language, leaves much to be desired. What we call "negro talk," so much like "baby talk," is a proof of this.

* M. E. Maillet, *op. cit.*, p. 540.

In the same way the repugnance of deaf-mutes to using the verb *to be* is equalled only by their awkwardness when they do try to use it. They will write, for example, piling the substantive verb on top of the attributive verb, "I am eat the bread," "Paul is walks." But the essential reason is that the child is still incapable of distinguishing the different parts, of analyzing the three elements of each one of his judgments. Each of these affirmations is a whole, a block, which he cannot separate. It is even permissible to suppose that in the little sentences in which he tries his thought he does not even separate the words that compose them. He resembles that foreigner cited by Bréal who said, "I have looked in vain in all the French dictionaries for a word that is used a great deal in Paris, and in circumstances the most diverse, the word *ça y est*."

Let us not expect exactness of language and precision of form from the lisping child. He has done better than we could expect, to learn to express, no matter how, in so short a time, in the face of mistakes and the difficulties of a language that he partly invents, the first affirmations of his judgment. Taine gives a striking example of this early need of judging, which struggles against the obstacles of speech and which triumphs over them. "A little girl eighteen months old laughs heartily when her mother and her nurse play by hiding themselves behind a chair or a door and saying, 'Coucou' [Cuckoo]. At the same time, when her soup is too hot, when she goes near the fire, when she extends her hands towards a candle, when they

put her hat on in the garden because it is hot, they say to her '*Ça brûle*' [It burns]. Here are two striking words, which designate for her the strongest of her painful sensations, the strongest of her agreeable sensations. One day, when out on the terrace, seeing that the sun was disappearing behind the hill, she said, '*A bule coucou.*' This was a complete judgment."* The child, indeed, will put no more than this in his affirmation when he can say, "The sun has gone to bed." Other examples: A little girl, in complaining of her physician and of his disagreeable orders, said, "Doctor, naughty girl." Another child, to designate a large tree or a small tree, says, "Baby tree," "Papa tree."

Every judgment, as we know, presupposes two ideas brought together, or, to speak more exactly, according to Kant, the act of "subsuming," of making one idea contain another. Intuitive judgments, at least those which do not result from a comparison, and which are made immediately from the perception, or, to state it better, which coexist with the perception, are judgments of being; that is to say, in this case, without consciousness of it, the mind places the objects and the qualities that it perceives in the most general category of all, the category of being. It is only the abstract reflection of the psychologist, however, that makes this logical operation clear to the consciousness. Is it necessary to say that the child takes no account of this, when it is certain that even the adult does not make this analysis in the majority of his intel-

* Taine, *De l'Intelligence*, vol. i, p. 43.

lectual acts? Judgment, even in the grown man, much more in the child, is oftenest only an irresistible impulse that springs spontaneously from the perception, whether of objects or of the relation of objects.

The judgment of being—that is to say, the perception that becomes discernment and belief—has assuredly no need of the cooperation of language. This is not the case with the judgment of relation, which associates either a particular idea with a general idea, or two general ideas.* As soon as generalization appears words are useful, if not necessary, to serve as supports to the idea. And this is the reason that the judgment of relation does not really show itself in children until they begin to speak; up to that time they are confined almost entirely to the judgment of being.

We must guard, moreover, against attributing to language alone the progress of judgment; for it comes also in great part from the development of observation, and from the fact that as the mind becomes interested in more things it collects a larger number of perceptions. It is towards the end of the second year that we hear children express judgments like these: "Sister naughty"; "Dick big bow-wow," for "Dick is a big dog"; "Pretty house"; "All gone," to indicate that there is no

* We do not understand at all what certain psychologists mean when they speak of "judgments not involving general concepts," of which they give as examples sentences like this: "Peter is smaller than Paul." Here, they say, are "judgments that involve no concept." The idea of "smaller" is, however, a concept, a general idea. (Maillet, *op. cit.*, p. 589.)

more, that the milk-cup is empty. In all these examples we find that the subject is individual. It is not until a little later that the child will come to pronounce judgments on classes of objects, when he will say, for instance: "Bad children play with mud"; "Good children do not put their fingers in their nose."

Sully says that the first explicit judgments are characterized by individual objects, and he cites several examples of this which prove that a word, a single word, is enough for the child when he formulates his thought. "When a child of eighteen months, on seeing a dog, exclaims 'Bow-wow,' or, on tasting his food, exclaims 'Ot' (hot), or, on letting fall his toys, says 'Dou' (down), he may be said to be implicitly framing a judgment: 'That is a dog,' 'This milk is hot,' 'My plaything is down.'"* A little later he uses more words. At nineteen months the child observed by Sully associated two words, and said, "*Dit ki*" for "Sister is crying." Some time afterward he went so far as to use three words and more: "*Ka in milk*," "There is something dirty in the milk"; "*Dit dow ga*" for "My sister is on the grass."

It has been claimed that in these first enunciations the child, by a sort of natural and normal inversion, always places the attribute before the subject, that he says invariably, "Pretty flower"; "Pretty mountain"; "Bad pussy"; "Bad Medor."† As far as we have observed, we have not found that this is a general law, a constant rule of the child's language; and the idea would seem to be contra-

* Sully, *op. cit.*, p. 435.

† Mailliet, *op. cit.*, p. 541.

dicted by the observations made on English children, who violate the grammatical rules of their language in placing the adjective after the noun. Doubtless we cannot speak of the child's language as of a regular and methodical tongue, in which, as Fénelon says, "we always see a nominative substantive coming first, leading its adjective by the hand." The child is freer in his ways, and he often reverses the logical order. But he conforms to it, too, and his sentence takes such and such a turn, according as his attention has been struck forcibly by the subject or by the attribute, by the object or by the quality.

Mr. Sully is more exact in his observations concerning negative judgments. He states first that the child he has studied, whom he designates by the letter C, has not expressed judgments of this sort until the third year, which fact tends to prove that this form of expression is a little repugnant to the mind of the child. What is certain in any case is, that they have a way all their own of employing it. C, in his third year, took up the habit of expressing himself in this way: "Baby go into the water, no!" "It was observed further in the case of two children, that during the third year they were apt to couple affirmative and negative statements—e. g., 'This I's cup, not mamma's cup.' 'This nice bow-wow, not nasty bow-wow.'"* In the natural movement of his thought the child begins with affirmation, and it is only in correcting himself, in retracting, that he comes to negation.

* Sully, *op. cit.*, pp. 320-321.

III

From judgment to reasoning is only a step. It has even been held that in every judgment there is reasoning: explicit and conscious reasoning, if it is a question of reflective judgments; implicit and more or less unconscious if it is a question of judgments which, though apparently immediate, are, however, only conclusions from hidden premises. The same logical force that has just brought the child to compare notions, now sends him on to grasp the relation of two judgments; and this is reasoning. This faculty of comparison will not seem so extraordinary if we remember that at first it is brought to bear only on particular facts. The reasoning of the child does not go beyond induction, and the sort of induction that has nothing scientific about it, that infers merely one fact from another fact. The child foresees that the candle will burn him, because it has already burned him. He gives up a forbidden act because he remembers that the first fault brought its punishment. He counts on his mother's running to him at the sound of his cries, because yesterday or the day before she did this. In all his little reasonings, the thought of the child goes very simply from a first fact, perceived by the senses and held by the memory, to another fact of the same sort.*

* These inferences do not belong particularly to the human species. The cat reasons almost in the same way—for example, when, associating the idea of crumbs of bread scattered along the walks of the garden with that of the arrival of the sparrows, which will come to eat the crumbs, she hides herself in the shrubbery as soon as the crumbs have been scattered.

It awaits the renewal, the return, of what has already happened, and we might say that habit, rather than reflection, comes in in these first attempts at reasoning, since it reduces itself to foreseeing the repetition of a chain of facts observed several times before.

But very soon, while continuing to infer only from a particular to a particular, the child goes a little farther; from the fact that serves as a point of departure, he reasons, no longer to the reproduction of the usual consequence of this fact, but to the possibility of a fact, analogous, doubtless, but of another sort. Thus a child observed by Sully, at two years and two months, pretended to put water in a plate to dissolve some pieces of meat, remembering that in this same way he had dissolved pieces of sugar; here it was analogy that directed the child. So, in this observation reported by Egger: "At four years and two months, Émile sees the window closed in a room where some one is smoking. He asks himself how the smoke is to get out, and he answers himself by pointing to the cracks around the windows. 'For,' said he, 'the smoke is very small (*toute petite*); it is like water; when I put water in my hand it goes out there'; and he showed the opening in his fingers pressed one against the other." * Analogy led the child in this naïve induction. He compared the way liquids and gases act, and concluded that what is true of one fluid is true of another.

Other examples: A child that had been told often,

* Egger, *op. cit.*, p. 56.

as all children are, that he would grow with age, amused himself with a short slender switch, and seemed to be trying to use it for a cane. His mother spoke of it, and the child answered, "I will use the stick for a cane when the cane grows larger." Sully, from whom we borrow this fact, believes that he sees in this response a general principle admitted implicitly by the child, that all things tend to grow with time. We believe, however, that there is here only the application to another particular object, to a stick of wood, what the child has observed or been told about himself. In universal laws, applicable to all objects, to all beings, the child has no interest. Even in the pretended deductions attributed to the child, we see only simple inferences from particular to particular. "Émile," says Egger, "notices on my table one of those cards that indicate the place of a guest at a dinner, and this card bears my name. He asks me for the *other card*. I do not understand at first, but he soon explains to me that the card he is asking for is that of invitation, because he has seen invitations to dine written on cards of the same kind. Thus every dinner presupposes a card of invitation; or: you have been to dine in town, then you have received and ought to have a card of invitation. It will be ten years before he learns in his logic what good reasoning he has performed." This, I believe, is forcing things a little. It is more than probable that the little reasoner in question obeyed simply the association of two remembrances which represented the two cards to him as always accompanying one another.

We do not think that the child's intelligence can go very far beyond the inductions that pass from like to like, from one thing to the same thing, inductions which in any case do not end in general, universal propositions. The child infers from yesterday to to-day, from to-day to to-morrow, or to the next day, from what goes on in his own home or at school, to what is going on in a neighbouring house or school. There can be no question of expecting conclusions that embrace the future, of which he has no idea, or the entirety of space, of which as yet he can represent to himself only a little corner. How could this little creature of a day, so limited in his knowledge, conceive of the universal? How, when he has behind him only a few months of remembrances, when he has taken only a few steps in the world, how could he introduce words like *always*, *everywhere*, into his little inductions?

In the majority of the child's inferences we see involved a real notion of causality; it is an interesting question to ask, up to what point, and in what way the child brings this out from the confusion of his perceptions. We do not believe that he comes to it all at once, as though by a sudden bound of the thought. Education—that is to say, the action of parents and of those who bring up the child—will play a large part in the development of the notion of cause. The idea of the relation of cause and effect can come only from a constant, regular, recognised succession between antecedent and consequent. But in badly regulated education, where caprice and incoherence reign, in which there is neither order nor connection, the child loses his

way and finds nothing to prepare him to grasp a relation of co-ordination between the different events of his life. On the other side, the world of Nature is closed to him. He has not, at least in the first period, a firm enough nor a penetrating enough glance to discover by himself the regular order of phenomena and the causal relations of outside things.

It is in the efficacy of his cries, considered as means of obtaining a favour, or simply the satisfaction of his needs, that the little child probably finds the germ of the notion of cause. Later, as soon as he begins to understand what is said to him, we really give him lessons in causal sequence when we say, "If you do that, you will be punished"; "If you walk on the ice, you will slip"; "If you eat too much of this fruit, you will be ill." At the same time, merely by the fact that he acts and that he notices the consequence of his actions: the door opens if he pushes it; the plaything breaks if he lets it fall—he becomes attentive to these regular successions of facts, and he conceives little by little the idea of cause and effect. What is undoubtedly true about this is that towards the third year this idea unconsciously governs a large part of his thoughts and provokes his incessant questions: "What makes the snow? What makes the watch tick? Why is little brother ill?" and the whole series of *whys*. He must have an explanation, whatever it be; the most careless sometimes suffices, but there must be one. A child two years old, who was fed on the milk of a white cow, said: "The milk is white because the cow is white!"

The *why* of the child seems to us to be a question of causality rather than one of end and aim. The child is more curious to understand the origin of things than to know their end. It is because the idea of the end, the goal, can come only from the personal experience of reflective acts, of voluntary intentions, which go beyond the level of the little child's activity. The end is doubtless a cause, the cause to come; it is the goal, seen in advance by our intelligence, and therefore becoming the principle of our efforts. But there is here a delicate and relatively subtle conception which the child does not approach so easily as he comprehends the efficient cause. We would not wish to say, however, that it could not be developed towards the third or fourth year, being suggested by the actions that the child already performs with a certain premeditation.

It is then the experience of his own actions, much more than the consideration of Nature without, in its immutable and inflexible laws, that sets the child right in his first reasonings of causality. If he possesses vaguely the notion of cause, we assuredly will not say that, like a little Maine de Biran, he draws it from the consciousness of his will acting on his muscles; * but it is none the less true that the child, so to speak, moulds his notion of first causes on the model of his own actions. This is why he will say, if his doll falls to the ground, "Naughty doll!" because he fancies all objects are animated, made in his own image, and because he

* See, later on, Chapter VIII.

attributes to them the same principles of action that he has observed in himself.

In order really to assist the beginnings of the reasoning of causality, we must take a child four or five years old. At five and a half George seems very much occupied with the origin of things, and he does not seem in the least disposed to respect the maxim of Aristotle relating to the regression in the series of causes, the famous *ἀνάγκη στήναι*. "But," he repeats insistently, "what was there before God? I want to know that! . . . When this house was not here, there was a big hole in its place." The child observed by Egger reasoned in almost the same way when he was seven and a half. The child asked his mother, "What was there before the world?" Answer: "God, who created it." "And before God?" "Nothing." To which the child replied, "There must have been the place where God is."* In these two examples, reason, we may say, appears clearly, with the need that it will feel of finding a final explanation, a first principle, with the tragic perplexity that the greatest philosophers do not escape any more than the child, and into which the consideration of the beginning of things always throws us. Some of the antinomies of Kant exist already as germs in the perplexities of the childish intelligence.

The child's reason shows itself comparatively early in the conception of space, if not in that of time, which seems always to be later. This difference is easy to understand. The child lives con-

* Egger, *op. cit.*, p. 55.

stantly in relation with space, and his glance darts out into infinity, while his experience of time is still almost nothing. In his conception of space, the child does not seem to go beyond the imagination of primitive peoples, who willingly give themselves up to consider the heavens as an inclosed vault, to which the stars are affixed like golden nails. But if he has not the least suspicion of what the philosophers call the infinity of space, at least he seems very early to imagine as apparently necessary, though incomprehensible, the existence of space, as such, distinct from material things: witness the child observed by Egger, who was looking for something he could not find, and cried, while continuing his search, "It must be true that something is somewhere!"

IV

However disposed we may be to grant much to the child in point of judgment and of reasoning, we cannot hide from ourselves the fact that in this matter, too, we must guard against being deceived by appearances. Egger has written a pretty chapter on what he calls "the real weaknesses of intelligence in children." *

Let us say at the outset, that without wishing it, with all the innocence in the world, the child deceives us, dupes us, leads us astray as to the power of his intelligence. I do not speak only of blindness due to parental love; we are always prompt to interpret most favourably the acts and

* E. Egger, *op. cit.*, part ii, p. 25.

the ways of our sons and daughters, to see in them what is not there. In them

“All metals are gold, all flowers are roses.”

But further than this, by reason of his very nature, of the alertness of his memory, and the power of his instinct of imitation, the little child imposes upon us as to the value and the merit of his judgment; and merely by exercising his mechanical powers he feigns, and only feigns, the acts of a reflective intelligence, which invents and reasons. We ought often to ask ourselves, in presence of an unexpected reflection, judicious or piquant, of those that we call *enfants terribles*, whether it is anything more than a remembrance preserved by a faithful memory of a reflection already heard and caught, as it were, on the wing, from the lips of another. Many seemingly genuine acts of mind for which the child is given credit are only remembrances. Where we think that we can admire a little prodigy of imagination and originality, there is often only a perfect little parrot.*

On the other hand, it would be unjust to put down as weaknesses of intelligence the naïvetés, the foolish things that slip from the child; they are often only awkwardness and ignorance of expres-

* Add what Rousseau says in a passage in which he overwhelms with his irony those children that are endowed with unusual traits: “Is it astonishing that he who is made to say a great deal, and allowed to say anything, should make by chance a happy witticism? It would be more astonishing if he never did do this, as it would be if in a thousand falsehoods the astrologer never predicted one truth.”

sion. Being still unskilful in the management of a language that he is only just learning, he necessarily makes mistakes; he is embarrassed by the complexity of the language; he becomes confused as to words. Some one said to George: "You are now four years and a half old, and your brother is ten months old." George, astonished, replied: "But is Marcel, then, older than I?"* Heedlessness, no doubt; but at the same time verbal inexperience, the inability to grasp quickly the sense of all the words in a sentence, so that the child noticed simply the numbers four and a half and ten, and made a comparison of them, without troubling himself about the words that accompany these numbers: years and months. Sometimes it is the employment of figurative language that leads the child astray, he being naturally disposed to take all the words of the language only in their literal sense. In a primer the examples are not stated with perfect correctness. George reads this sentence: "My mother has taken care of (*soigné*) my piano." The child, surprised, exclaims: "Why, papa, it was then a live piano!" In other cases the mistake is caused by a total ignorance of the sense of the expressions employed. "I had a wound on my foot," says Egger. "It was done up in a piece of white linen. Émile, who was nearly two years old, often looked with interest at what he called *mon petit mal*. He asked me how it was; that is to say, he

* Compare the example given by Egger: "To the question, 'How old are you?' I suggest to my son to reply, 'Three years and six months.' He does not understand, and says, with an air of astonishment, 'Have I two ages?'"

understood that I suffered, and he sympathized with my suffering. But then he asked me to give him my *petit mal*. Either the child is very precocious as to his charity, or by *petit mal* he meant simply the white linen." The latter was undoubtedly what the child did mean; but in this there is merely an error of language, of which we see many more examples when we talk with peasants, with uneducated people. It is not to the child, certainly, that Boileau's line is to be applied: "What is conceived clearly is expressed clearly." The soul of the child, we might say, in parodying a celebrated definition, is often an intelligence *betrayed* by the organs.*

Nevertheless, there are really weaknesses, intellectual infirmities, to be charged to the character of the nascent mind of a child. Without pretending to enumerate all the causes, all the categories of these failings, of these gaps of intelligence in process of formation, we shall try to distinguish the principal ones.

The first, it is hardly necessary to say, is the small amount of knowledge at the child's disposal. His experience is so short! He knows so few things! How could he judge with surety, with

* Almost all the examples reported by Egger are verbal errors. Thus the child confounds *prêter* and *emprunter* (to lend and to borrow), and says, "Do you want to borrow me your seal?" He dislikes to use possessive pronouns, and has difficulty in understanding them. "If I ask him to show me *my* nose, *my* eyes, it is his own that he will point to, not mine. In order to make myself understood, I have to say to him, 'Show me *papa's* eyes, *papa's* nose.'"

justness? In this unknown world, of which he has caught sight of only a few fragments, he gropes, so to speak, in the darkness. Why should not his thought stumble at every step? "The ease with which children can be deceived is to be attributed to lack of experience far more than to lack of intelligence," says Preyer,* and he is right in this. It is not the logical sense, the sense of intellectual construction, it is above all the materials that are lacking in the child.†

On the other hand, if the notions that he works on are necessarily few and almost without variety, they are far from being always clear and distinct. His ideas are lacking in quality as well as in quantity. He confounds very different objects under the same name. His generalizations are arbitrary and jumbled. Papa, mamma, at first serve to designate for him all men, all women.‡ It is only step by step that he separates from their primitive confusion ideas that are essentially distinct. A little girl three years and a half old sees the window-shutters closed for the night. *Night* and *closing shutters* are two ideas that are joined in her mind. In the morning she goes into a room in which there

* Development of the Intellect, p. 17.

† "Children," says Guyau, "are persons of one idea, and sometimes reasoners to excess. The child has an essentially logical mind. For instance, he demands that what one has done once, one shall do again, and under the same conditions."

‡ Aristotle had noticed this when he wrote: *Καὶ τὰ παῖδια δὲ τὸ μὲν πρῶτον προσαγορεύει πάντας τοὺς ἄνδρας πατέρας καὶ μητέρας τὰς γυναῖκας, ὕστερον δὲ διορίζει τούτων ἑκάτερον.* (Physics, Book I, chap. i.)

are two windows, one on the east the other on the north side; the latter still has the blinds drawn; the child says that it is still night on that side.

What we ought not to forget, either, is that chance, accidental, and superficial associations rule the mind of the child. Doubtless he already obeys the principal laws of the intellectual nature, but apart from the fact that he knows, as yet, only a few things, and that he knows these imperfectly, we might say that his inferiority in point of intelligence results above all from this: that time has not yet accomplished in his case that natural selection which, little by little, discards the unimportant images, the trifling relations, to leave only useful associations and substantial connections.

It is evident, moreover, that the child has a slight disposition to be logical rather than that he possesses the force of mind necessary to follow his efforts of reasoning to their end. There can be no question of expecting rigorous deductions—deductions in proper form—which presuppose the intervention of abstract principles and of general truths, a whole world almost inaccessible to the child's intelligence. But even in induction, which is more appropriate to his capacity, the child does not, in spite of the examples to the contrary that we have been able to give, push his investigating researches very far.* He stops very quickly in the chain of causes. He is contented with little in point of explanations. He neglects to seek for new causes,

* This apparent contradiction resolves itself into a question of age.

being satisfied to bring up again by routine the causes that he already knows. A baby two years old scratched himself, and when asked why the blood was on his hands, he replied, "Fell down." In the acts that he performs the child does not even know how to use his perceptions so as to connect them, how to bind them together. Preyer gives us the following: "When I used to say, 'Give the ring,' I always laid an ivory ring, that was tied to a thread, before the child, on the table. I now said the same thing, after an interval of a week, while the same ring was hanging near the chair by a red thread a foot long, so that the child, as he sat on the chair, could just reach it, but only with much pains. He made a grasp now, upon getting the sound impression 'ring,' not at the thread, which would have made the seizure of the ring, hanging freely, very easy for him, but directly at the ring hanging far below him, and gave it to me. And when the command was repeated it did not occur to him to touch the thread."* In this case we see that the conception of the relation between two objects equally perceived escapes the child.

Even when the childish intelligence has acquired sufficient number of distinct notions, definite enough to be used, we find one or two general causes that stop its flight. The first is the inconstancy of impressions. We will not go so far as to say with Rousseau, that pitiless slanderer of the child, whom he did not understand: "His ideas, however many there may be, have in his head neither sequence nor

* Development of the Intellect, p. 13.

connection; nothing fixed, nothing positive in all that he thinks." Rousseau goes to extremes in his generalizing; on the contrary, the child often gives proof of stubbornness that shows only a too great fixedness in his ideas. Let us acknowledge, however, that most often his thought easily leaves an object that it is considering to pass to another object; it flits from idea to idea, as a bird from branch to branch, and in this perpetual motion it wastes itself, it scatters itself without profit.

The greatest cause of intellectual weakness in the child, apart from the poverty of his knowledge, is his hastiness of judgment, the absence of reflection. The heedlessness that almost always characterizes youth has no more certain beginning. In the adult, in the reflective man, the thought has hold of itself, takes its time, interpolates between the conception and the judgment a greater or less number of intermediates. In the child the thought bursts forth, leaps forth as though impelled by a spring, with almost the characteristics of reflex motion. His intelligence responds, by an immediate reaction, to the excitation of ideas, as his will yields, without resistance, to the solicitations of his desires. In other words, we do not find in the little child the faculty of intellectual inhibition to moderate, to suspend, to ripen his judgment, any more than we find the faculty of voluntary inhibition to temper his impulses. He springs, so to speak, on the first idea that presents itself just as he throws himself on his playthings, heedlessly, fearlessly. The majority of his errors, of his naïvetés, or of his absurdities of thought, result from the same cause

that brings about his false step and his falls; he goes too quickly and hurls himself too impatiently at his goal.

It is none the less true that in these weaknesses of the child's intelligence we can see nothing that resembles intrinsic vice or original depravity any more than in the little faults of his moral life. The child is not more illogical intellectually than he is immoral practically. We ought to see in the weaknesses and infirmities of his faculties only the provisory and fleeting defects of a state of crisis and of a period of growth.

CHAPTER III

LEARNING TO SPEAK

- I. Difficulties in acquiring a language.—All the physical and moral faculties are involved.—The emission of sounds.—The hearing of sounds.—The vocal and the acoustic mechanism.—Action of intellectual faculties.—Parallel between impediments in speech of an adult and the imperfections of language in the child. II. At what age does the child begin to speak?—Different steps to distinguish in the evolution of language.—First vocal manifestations of the child.—Their characteristics: they are spontaneous and without meaning.—They have meaning only for those who listen to them.—At first instinctive, the emission of sounds becomes reflex, called forth by acoustic impressions.—The child comes to comprehend the sense of what is said to him.—Understanding signs precedes the employment of signs.—Interpretation of gestures.—Gestures and intonation.—Gesture accompanies and aids the first vocal signs.—The child speaks from the first day that he gives meaning to any articulation. III. The child's spontaneity in acquiring language.—Opinions of Romanes, of Maine de Biran, of Albert Lemoine.—Observations of Taine and of Egger.—Three cases to distinguish: *a.* The child furnishes the sound and parents give it its meaning; *b.* The child invents at once the sound and the sense; *c.* Parents furnish the sound and the child gives it various meanings.—The child generalizes the meaning of words.—Different proofs of the child's inventive force in matter of language.—The case of Laura Bridgman.—This inventive force increases when circumstances favour it.—Imitation is, in the same way, the essential condition of the formation of language.—Onomatopœia is an imitation.—The child

wishes to imitate before he has the power. IV. The child's logical sense in the formation of words and the construction of sentences.—The child's barbarism and mistakes.—Constructions apparently irregular.—The use of the negative.—Comparison with the language of deaf-mutes.—The progress of the child's phraseology.

I

THE education of speech, which is the highest act of human evolution, seems slow sometimes to impatient parents, who complain that their child does not talk early enough, only to regret afterward when he fatigues them with his prattling, that he talks so much. The truth is that, on the contrary, they ought to wonder at the marvelous facility with which the child can, in a few months, learn to talk. Let us consider the difficulties that we ourselves have to conquer, we who are in possession of all the strength of our organs and faculties, if we would add the knowledge of a strange tongue to those that we already speak. And what is this in comparison with the effort necessary to the child in order to pass the natural aphasia, the normal alalia of the first days, to easy and more and more complete possession of the mother tongue? How many different elements and successive degrees does the elaboration of speech include? Physical organs and intellectual faculties aid equally in the operation. It is necessary, on the one side, that the physiological mechanism should be organized and regulated, to assure either the utterance or the hearing of sound; it is necessary, on the other hand, that the intelligence and the will should seize upon the organs, should master them, to adapt them and

adjust them to their ends; that perception should distinguish the sounds heard; that memory should retain them, that a persevering attention should fix them in the memory; that the thought, finally, should introduce sense, meaning, into each articulation uttered spontaneously or received from the lips of others; that it should give soul, so to speak, to what is at first only a material covering, empty of all contents. In the case of language, taking possession sums up all the child's progress, because here all his faculties work together.

Let us go at once into details. The mechanism of language presupposes first the organs of utterance, of the production of sound, all that renders possible the first inarticulate sounds, the cries, the wails of the first age; then sounds more and more articulate, modulations of the voice—the motions of the larynx, of the tongue and of the lips. Moreover, this faculty of articulation progresses only slowly, according to the law of the least effort. Up to two years, the child articulates only very incorrectly, and is powerless to produce several sounds to which he seems to have an invincible repugnance. It is necessary that the structure of the vocal nerves should be completed, that the vocal cords should stretch, that the muscles of the organs of speech, essentially voluntary, should be strengthened and made supple in order to permit the will to direct them. The human voice must succeed to the instinctive cries.* The consonants must be joined to

* According to Egger, the transition from the cry to the voice would be appreciable towards the end of the second month. Ac-

the vowels, and the indistinct sounds of the first weeks and of the first months must take form and consistency.*

But in order to be capable of speaking, it is necessary also to be capable of hearing. Deaf-mutes are only deaf; they can also, as the result of the artificial methods applied nowadays to their education prove, succeed in emitting sounds, in pronouncing words.† If they do not speak naturally, as those who can hear, speak, it is simply because they do not hear; it is because the human voice and the sounds of Nature produce no impression on the sense that is lacking, and so do not suggest the imitation to them. We must then take account of the organs and the functions of the hearing apparatus as an essential part of the faculty of speech. But the child is born deaf; he does not hear himself even; he does not hear the cries that escape from him on his entrance into the world. This total deafness will, it is true, last only a few hours; but it will take longer—several weeks, certainly—before the child can seize distinctly and delicately the shades

cording to Preyer, it is only in the ninth month that the child's voice, often very strong, but inarticulate, is finally modulated.

* According to Romanes, this was probably the order in the evolution of articulation; "The natural cries being, above all, furnished by the throat and the larynx, without much participation by the tongue and the lips, the first efforts at articulation must have produced vowels, to which were afterward added the guttural and the labial consonants. Then the liquids, and finally the linguals would have been used." (*Mental Evolution in Man*, p. 360.)

† See, for example, the work of Goguillot, *Comment on fait parler les sourds-muets*, Paris, Masson, 1890.

of sound, and even the sounds themselves. The hardness or lack of delicacy in hearing often explains the slowness of the progress of speech. The weakness of the instrument of articulation is not the only cause of this, but it is undoubtedly true that, slow or rapid, the adaptation of the acoustic organs is one of the first conditions of the acquisition of language. It was only at eighteen months that the child observed by Preyer recognised the acoustic differences of consonants pronounced before him.*

We shall see farther on that the child has his share of spontaneity and of invention in the creation of language. It is none the less true, however, that he is guided, above all, by his auditory impressions and by imitation. What his ear has heard, his mouth will finish by repeating, but this on one condition: that, thanks to the operations that are going on in his brain, what was at first only the excitation of the acoustic nerves becomes the moving impulse of the nerves and of the vocal muscles. The action of the cerebral organs is necessary, then, to render possible the communication by which the external impressions of hearing may be transformed into mental images, which, in their turn, will give place to appropriate motions in the organ of speech.†

* Preyer, *Development of the Intellect*, p. 130. Preyer observed his child every day, for the first three years, to find out the beginnings of language. The account of these long and minute observations will be found full of interest (pp. 99-188).

† Preyer calls attention to the fact that "the purely peripheric processes of articulation have been in play a long time, even when it is impossible for the child to repeat a simple *ah* or *pa*; for the child pronounces these sounds and others by himself; but as yet

And it is not immediately that the child's brain acquires the development necessary to bring about this action.

When, however, the material means of the vocal mechanism are finally sufficiently developed to be capable of responding, there still remains everything to be done. The life of speech has not yet begun. The sounds emitted by the child have still nothing expressive about them. He produces them mechanically, unconsciously, without attaching any meaning to them, at the most like a game, for the pleasure that he derives from the motions of the tongue, of the lips, and of the other organs of the voice. He attaches no meaning to them. On the other hand, he does not understand the sounds that he hears. Moreover, he has much trouble in distinguishing them, in knowing where he is in his auditory impressions. Preyer's son was six months old when his father, showing him one ear, and saying, "Where is the other ear?" trained him by frequent repetitions to indicate correctly first one ear and then the other. "Now, then," Preyer goes on to say, "the thing was to apply what had been learned to the eye. When one eye had been pointed out, I asked, 'Where is the other eye?' The child grasped at an ear, with the sight of which the sound *other* was now associated."* How many analogous mistakes retard the progress of language!

The greatest of all the difficulties, however, that he does not control central organs sufficiently strong to join them, to make the auditory impressions act on the motor organs of speech."

* The Development of the Intellect, p. 128.

which constitutes the rub, so to speak, of the acquisition of language, is that the child, when he can make use of his intelligence to grasp the relation between a sound and an object or the idea of this object, between any utterance and a need that he feels, in trying to express his desires, voluntarily makes use of the voice that he has employed for a long time only as a bird chirps—without intention, without purpose. Doubtless this moment, which is all-important in the life of the child, has been prepared for, anticipated, by another moment—that in which, before thinking out his own speech, he has understood the speech of others. But the problem is really solved only on the day when he can intentionally give to his own utterance a clear and determinate signification. Maine de Biran made the existence of the feeling of the ego, the human personality, date from this day. "There comes," he said, "a moment when the existence of the child ceasing to be purely sensitive, that of the human being will begin; and this moment coincides with that in which the child, who has cried as he has done everything else, without intention, begins to perceive these cries, these motions, carried on within himself without his volition, by a force whether natural or vital, whether supernatural or divine, and he repeats them voluntarily by his own force, and attaches to them for the first time an intention or a meaning." *

When in his normal evolution the child has come, sooner or later, to speak easily, this final

* Maine de Biran, M. de Bonald in the *Œuvres inédites*, p. 274.

state is then a result of a chain of operations of which the regular and easy working obscures from us the complexity of the elements that aid in making it possible. An attentive observation of the child and of the beginnings of language leads to the discovery of the different parts of the mechanism, the multiple operations of the faculty of speech, as they enter successively into play. An interesting counterproof, however, is that the examination of the weaknesses and diseases of language in the adult shows us under clear and durable forms the equivalent, the pathological likeness of these successive states, which in the baby are only fleeting periods, the natural phases of physiological and of psychological evolution. In other words, there is a striking parallelism between the different normal situations that the child passes over while acquiring the language, and the abnormal states into which weaknesses, whether physical or moral, throw the adult while losing it.

We shall cite only a few examples of this.* Thus it is found that victims of aphasia can sometimes hear and understand all that is said around them, can read easily, but are at the same time unable to pronounce a word or to write a line. This corresponds to what happens in the first period of the child's life, when, already intelligent enough to grasp the meaning of the words addressed to him, the child has not as yet the power to repeat them, whether because the structure of the vocal

* See in Preyer (*Development of the Intellect*, chap. xvii, pp. 33-62) the parallel between difficulties of speech in the adult and the imperfections of language in the child.

nerves is still imperfect, or because he has not as yet enough will to direct them. *

In other cases, on the contrary, in certain insane people, the organs of outward expression are not injured, but the intelligence, the comprehension, is lacking. There are forms of dementia in which the patient delights in a flow of words absolutely without sense. So we can see in the child a phase during which he prattles, chatters like a parrot, without the slightest sense.

There are melancholia patients who only with the greatest difficulty can bring themselves to pronounce a word or two, and who are plunged again immediately afterward into profound silence. So the child sometimes begins to speak, then stops, and is silent during weeks, and even months.†

Finally, we find in insane people, in whom there remains no more than unformed *débris* of language, some incoherent and unconnected syllables. Is this not, to a certain extent, the image of that rudimentary state in which the child finds himself when he can only lisp single words without co-ordination, without sequence? How many other analogies we might note! Invalids who sputter because their tongue is paralyzed; those who have lost the faculty of understanding signs of whatever sort; those who repeat incessantly the same word,

* The child understands gestures before he understands words; so there are insane people who understand gestures and obey them, when they have lost all power to understand the meaning of words.

† Sounds, very clearly enunciated for some time, afterward disappear. Preyer notes this, p. 103.

the same sentence; those who, ruled by sense alone, break forth into rapid, voluble speech; in all the forms of aphasia, in a word, whether because of the lesion of organs or of the weakness of the intelligence, or of lack of will-power, the adult can lapse back into the weaknesses that characterize the first gropings of language in the child, and so produce, in a way, a caricature of them. What is disease in the one, however, is only weakness in the other, and sad as is the sight of a man that a morbid fatality gradually deprives of speech, it is, on the contrary, a charming picture that the child offers us in the regular growth of his intelligence, as he advances to the different stages of speech, as the intelligence comes, little by little, from the cloud that enveloped it, as Mme. Necker de Saussure says, or, following the expression of Victor Hugo, as "day breaks in his brain."

"Paul avait chaque mois un bégaiement nouveau,
Effort de la pensée à travers la parole,
Sorte d'ascension lente du mot qui vole,
Puis tombe et se relève avec un gai frisson,
Et ne peut être idée et s'achève en chanson,
Paul assemblait des sons, leur donnait la volée,
Scandait on ne sait quelle obscure strophe ailée,
Jasait, causait, glosait, sans se taire un instant."

II

We shall not insist on the question at what age the child really begins to speak. Although children show great differences in their facility of expression, in the precocity or the slowness of their language, it is allowable to say that generally they

lisp their first intelligent words towards the middle of the second year, and that in the course of the third year they acquire all the essentials of the faculty of speech. Mme. Necker says that a well-endowed child speaks well at two years. The children that we have observed, without being less intelligent than others, have been slower than this. Tiedemann's son was twenty-three months old when he pronounced his first complete sentences, but they were very short: "He is there." "He has gone to bed." At twenty-three months Preyer's son pronounced his first judgment in ordinary language, a single word, in saying intentionally *heiss* (hot) to refuse a cup of boiling milk that was offered him; but he was about two years and a half old before he associated several words in making sentences. It seems established that girls are usually in advance of boys, which, moreover, is only a particular case of the general law by which the intelligence of women has a more rapid evolution than that of men.*

More important, however, than the question of date—always uncertain and variable, by reason of differences of physical or moral aptitude, by reason also of the influence exerted in different places by the surroundings of the child and by milder or more rigorous training—is the precise determination of the different stages that the child sooner or later arrives at and crosses before he knows how to talk. It is from the first hour of life—let us not forget this—

* In the idiot there is usually more or less slowness of speech. But, in contrast to normal children, idiots understand no more than they say. (D. Sollier, *op. cit.*, p. 183.)

that this work of preparation begins. As soon as he is born the child learns to speak, and for two or three years we might say that no day, no moment, is lost in the laborious apprenticeship of speech. Let us try, then—in a subject that would admit of much more ample development,* and in which observation is easier than in any other part of the psychology of the child, since here the facts are immediately discernible—let us try to mark by a few strokes the principal periods and the successive progress.

1. In the very beginning we must notice that in the first period the vocal manifestations of the child have a double character: first, they are absolutely spontaneous, the child neither repeats nor imitates; secondly, they have for him no meaning, no intentional significance, being purely mechanical actions in which the intelligence has no part.

In this vocal gesticulation of the child, moreover, there is to be distinguished, on the one hand, the cries that express corporal states, disagreeable or agreeable sensations, by which he relieves his discomfort and shows that he is hungry or cold, that he suffers, or on the contrary, more rarely, that he is satisfied and joyous;† and, on the other hand, the sounds emitted without precise cause, which are only a kind of babbling, an instinctive

* Preyer has devoted one-third of his work on the Mind of the Child entirely to the question of language. Romanes treats of language almost exclusively in his *Mental Evolution of Man*.

† According to Preyer, the cries uttered by the child, if we would represent them by vowels, would be almost equivalent to the sound *ua*, a short *u* followed by an Italian *a*.

exercising of his vocal cords, a sort of special muscular play.

Observe the child in his first period, towards the sixth or the eighth month; sometimes he cries because he is wet, because he feels a pain, because he desires this or that; to each need that is felt corresponds immediately a particular cry; sometimes when he has been fed and is satisfied, carelessly lying in his cradle, he prattles in a language that has meaning neither for him nor for others; he carries on these monologues composed of sounds more or less articulate; he gives himself up to the simple pleasure of moving the muscles of his voice long before he is capable of talking, just as he will stretch his legs and exercise the muscles of locomotion long before he can walk.

Preyer has carefully noted from day to day, in his own child, what vowels, what consonants appeared successively,* and how the precise articulations came little by little to give form to cries at first indistinct and confused. It will be possible some day, perhaps, when observations of the same kind have been often repeated, when they are made to correspond one with the other, to determine exactly, by reason of the material facility in the emission of this or that sound, the order of succession of the various articulations in the natural language of the child. It will be possible also to tell what sounds correspond to the expression of comfort or to that of discomfort, to hunger and to thirst, to astonish-

* Preyer says that he heard the first consonant pronounced on the forty-third day. The child said very distinctly *am-ma*. (Development of the Intellect, p. 102.)

ment or to joy, that is, if it is true, as we think it is, that natural reasons make such and such an emission of voice the especial sign of such and such a sensation rather than of any other.

But what is at present indisputable, is that these cries, which become more complicated from day to day, which change continually, are the work of Nature, of instinct, or of heredity. They have indeed only slight connection with the words of ordinary language.* The proof of this is that the child produces them a long time before he can, I will not say understand, but simply discriminate the sounds of his mother's voice. The proof, too, is that he will have a great deal of trouble, a little later, in reproducing the syllables pronounced before him.

What is also indisputable is that the cries of the child have no meaning except for those who listen to them. An attentive mother quickly recognises what constitute the cries of pain, the unconscious cries of appeal for nourishment. She interprets them and satisfies them. But the child who utters them does not hear them, and he is in the peculiar situation of a person speaking a strange language, unintelligible to himself and intelligible only to the strangers to whom he is addressing himself. The child will require time to introduce a meaning, a desire, an idea, an act of will, into the sounds that have

* "By far the greater part of the consonant sounds produced by the exercise of the tongue and the lips cannot be represented in print; just as the more prolonged and more manifold movements of the extremities, movements made by the child when he has eaten his fill, and is not sleepy, and is left to himself, cannot be drawn or described." (Development of the Intellect, p. 105.)

at first, so to speak, only a unilateral significance. For this it will be necessary—and experience alone will teach it to him, little by little—for him to have recognised that by his cries he made people obey him, that he got what he wanted or turned aside what he feared; for him to have acquired the consciousness of the utility of his vocal actions, and for him to have in consequence the idea of emitting them voluntarily, to obtain again the same results.

Let us note, moreover, that it is the same with these first emissions of voice and the motions that they produce that it is with all the other motions of the child: many of these motions are destined to disappear; many of these sounds cannot be classed in any human language, and they will never be utilized in the language that he will finally speak. The child, as a matter of fact, tries his vocal organs in every possible way and at random, so that he often invents queer untranslatable sounds which it would be impossible to represent by the ordinary letters of the alphabet.*

2. In a second period, the vocal manifestations that have been at first only spontaneous and automatic actions, become quite promptly reflex actions, determined by acoustic impressions. Before the age, even, when he will be able to repeat words, when he will hear more and more distinctly, the

* The mobility of the tongue is very great in the child. "The tongue is unquestionably the child's favourite plaything. One might almost speak of a lingual delirium in his case, as in that of the insane, when he pours forth all sorts of disconnected utterances, articulate and inarticulate, in confusion." (Development of the Intellect, p. 124.)

child is impelled by a sort of imitative impulse to cry, to emit sounds; he is instigated, so to speak, by the noise that strikes his hearing more or less confusedly; and it is as though in response to those who speak to him, that he most willingly makes his prattle heard.* This disposition will last until he is able to pronounce several words. At fifteen months, Marcel, started off by a few words that I had addressed to him, replies to me in an unintelligible language; then he is silent, looking at me with a very serious air. When I begin to talk to him again, he resumes his chattering. His brother, a little older, is in the next room, and calls to him; Marcel answers, and for a few minutes it is an interrupted alternation of words and clearly articulated sentences on the one hand, and little confused cries on the other.†

Long before the child knows how to talk we might say that he has, as it were, a premonition of dialogue, and that by sympathy, by social instinct, he feels a secret need of conversing, of exchanging words, as far as he can, with the people about him. Speech calls forth speech, or at least if not speech, certain expressive manifestations. Do not birds in

* We have seen, in the history of the smile, that we had to distinguish between the spontaneous smile and that which is only a response to the smile of others.

† These observations do not contradict the statements of the psychologists who declare that the first language of the child is a monologue. Pollock finds only at twenty months the first effort at holding a conversation. It is only in a second period, but a little earlier, we believe, than Pollock has found it, that participation in dialogue appears.

a cage begin to chirp, to sing, as soon as they hear us speak near them, as though they wanted to enter into a conversation with us ?

3. Up to this point, whether of his own accord or at the instigation of others, the child has let us hear only sounds to which he himself attaches no meaning, even if they have any for others. Language—by which we mean intercourse, an intelligent exchange of emotions and of ideas, a conscious communication between two thoughts—real language has not yet begun. In order that it may begin, it is necessary that the child, whatever may be the insufficiency of his means of expression, shall wish, no matter how, to say, or at least to signify, something. And to us there seems no doubt that this expressive intention shows itself very early. The cries, the indistinct sounds, the first efforts at articulation, hasten to become something more than automatic or reflex phenomena; they become real signs that the child employs to express what he feels and what he wants.

It is, moreover, necessary—and here we distinguish the third period—that the child, before giving a meaning to the sounds that he utters himself, shall have been able to guess at, to interpret the meaning of the sounds that he hears.* In other words, he must comprehend the speech of others before he can comprehend his own. He shows this in obeying what is said to him.

* "Infants learn the signification of many articulate sounds long before they begin themselves to utter them." (Romanes, *Mental Evolution in Man*, p. 123.) All the observers of the child seem to be of the same opinion.

The relation of the sign to the thing it signifies appears for the first time to his mind, not in what he says, but in what is said to him. So, according to certain observations, the passage from one of those stages to the other in the evolution of language would be slow and most laborious. Preyer states that up to the eighteenth month his son remained, on this point, in a purely receptive state. He was from the tenth or the twelfth month* capable of distinguishing the words that he heard, of interpreting them and of understanding them, of turning around when his name was called, of obeying, not without gropings and mistakes,† such orders as these: "Give me your hand!" "Show me the little rogue!" But the same child, for more than six months after this, was incapable of reciprocating; that is to say, he did not know how to employ any expressive medium to signify his needs and his desires to his parents.‡

It seems to us that in the observations just reported there is only an exceptional case of individual slowness in the acquisition of language.‡ Usually things move with greater haste, and signs—at least intentional gestures—if not words as yet, are expressed as early as the first year. The only

* Darwin also places the evident comprehension of words and phrases between the tenth and the twelfth month.

† Development of the Intellect, p. 9. The child answered the question, "How tall?" by joining his hands together, a movement that he had learned to make in expressing an entreaty.

‡ Ibid., p. 122.

Preyer frankly acknowledged the fact that his son was slow in this respect.

established fact in this connection, however, is that the understanding of signs always precedes the employment of signs.

In this the child does not surpass the animal. The dog understands the calls of his master. It is true that he has probably come to this only under the influence of long domestication and by consequence of his constant contact with man. Even the evolutionists recognise the fact that the psychological transformation of the dog is the work of society and of human education.*

We must distinguish several stages in this comprehension of signs. The interpretation of gestures—of a threatening gesture, for instance—which the dog understands as well as the child, is one thing, the comprehension of words is another. It has not been proved that the dog understands the word *whip*; but raise the whip threateningly, and he will immediately try to escape it. The comprehension of the word itself and of the intonation that accompanies it is another thing. The first, Romanes says, represents a stage of mental evolution much higher than the second.† It is a question whether animals ever understand words as words, independent of intonations; ‡ but the child certainly

* Romanes, *Animal Intelligence*, p. 437.

† *Mental Evolution in Man*, p. 123.

‡ Romanes does not hesitate to place himself on the affirmative, and he concludes that if animals were capable of articulating they would use simple words to express simple ideas. They would not need higher psychological faculties to say the word "Come" than to pull the dress or the coat of their master or their mistress, as they do; or to pronounce the word "Open," instead of crying in a particular way behind a closed door.

comes to this towards the end of the first or the beginning of the second year.

4. We come now to the fourth period—that in which the child shows his intelligence, not only in the interpretation of the sign that he perceives, as before, but also in the employment of the sign that he utters. To be sure, before the words themselves serve to signify the desires, the emotions, the ideas of the child, gestures will be employed for this use. The sign language prepares the way for the language of speech;* and when the child makes a sign of negation with his head, when he indicates with his hand the object that he wants us to give him, he is already trying to express what he wants or what he does not want. “The inner impressions of very young children,” says an observer cited by Romanes, “are translated by a few sounds, but by a great variety of gestures and of facial expressions. The gestures of a child are intelligent long before he speaks.” This is true, if we remember that before he is intelligent, before experience has established a relation between such and such a sign and such and such a sound, the child’s gestures have been automatic or instinctive, or at least lacking in the signification that they will have later. It is evident, moreover, that the transformation of the natural gestures of the child into intelligent signs is much easier than the same operation will be when it is a question of giving meaning to articu-

* “The origin and development of speech must have been greatly assisted by gesture. . . . Gesture psychologically precedes speech.” (Romanes, *op. cit.*, p. 152.)

lations pronounced at first without intention. Gestures are almost always, so to speak, the fore-shortenings of the spontaneous movements which Nature has in the beginning suggested to the child. We have seen this in the case of the kiss;* so the nodding of the head to say No, only a remembrance of the act of turning aside to avoid a danger, or simply the sight of what offends the eye;† the hand extended to designate an object that one wants, to ask for it, is precisely the movement that it would be necessary to make in order to take it oneself.

The association that gives a meaning not merely to gestures, but to articulations and words, is infinitely more difficult to establish. We shall see immediately how far it may be considered as instinctive, as resulting from the child's spontaneity. For the large majority of words, however, if not for all those that compose the child's vocabulary, it is experience, I mean hearing the word pronounced several times in presence of the object that the word designates, which alone can cause the child to use, in his turn, the same word with the same meaning. The child has heard words for several months without understanding them; he understands them several months before he can repeat them and pronounce them himself. "Every mother, says Preyer, "loses many thousands of

* Vol. i, p. 177.

† We do not say that these signs are not learned in part. Romanes says: "My son learned from his nurse to shake his head for 'No,' to make a sign of acquiescence for 'Yes,' to wave his hand for 'Good-bye,' and this at eight months and a half."

words that she speaks, whispers, or sings to her child, without the child's hearing a single one of them, and she says many thousand words to him before he understands one. But if she did not do it, the child would learn to speak much later and with much more difficulty."*

It is often, in order to accompany his gestures, that the child first uses his voice intentionally. Tiedemann says that his son, at nine months, pointed with his finger to make them notice the objects that struck his eye, and that at the same time he exclaimed, "Ah! ah!" And Tiedemann adds, "What proves that his gesture as well as his cry is addressed to others, is, that he is satisfied as soon as we show him that we have noticed the same object." Preyer himself reports facts that seem to contradict his own conclusions: at eleven months his son always uttered the same sound, *atta, attai*, when he saw that an object had disappeared, that a person had gone from the room, or that a light was being brought in. At nine months his voice undoubtedly indicated a desire, and when he asked for a new object he uttered the same cries that he was in the habit of producing before taking his nourishment. At the same age he accompanied the voluntary motions that he made with his hands and his arms, to seize or to hold an object, with a little cry, always the same.

In these beginnings of language the gesture often comes to aid the still imperfect speech. A child of fifteen months who had learned to raise his

* The Senses and the Will, p. 96.

hands when asked "How large is the baby?" did not have enough suppleness of articulation to pronounce the word *grand* (large); and when urged to say *Grand maman*, he settled the matter by raising his hands in the air and adding *Maman*.* Later, when the intellectual evolution is ended, gestures will be relegated to the second place, and will present themselves only as an auxiliary of speech; with the child, on the contrary, it seems that the beginnings of speech accompany the gesture, the latter being as yet the principal element of language.

The child, then, learns little by little to pronounce, to repeat, finally to interpret words. It is evident that in the intellectual work, by which he will be enabled to put a meaning into every sign, the child needs assistance. There are, however, many words in his vocabulary towards the end of the second or the third year that have never been taught him, that he has appropriated by himself. Preyer says that at twenty-one months Axel knew a great many words that no one had taught him, such as "whip," "stick," "match," "pen."† The child learns to speak in two ways: in one, the idea has grown in his mind at the suggestion of some perception or other; and it is to this idea that he attaches a word, often caught on the wing, as it were; in the other, the word precedes the idea; this word has been heard and retained, but it is only little by

* Compare Egger, p. 41. "In the beginning articulate language is very sparse and inadequate, and gestures have to be added constantly in order to make it intelligible."

† The Development of the Intellect, p. 142.

little, and after many gropings, that the child applies a meaning to it. It is by its own force that the intelligence—thanks to the power of the memory for words, thanks to a persevering attention, often witnessed by the meditative attitude of the child when he hears people talk—guesses the meaning of a great many words. This is the more remarkable, too, in that the child often comes to it even before he is in a state to repeat the words, or when he repeats them in a purely rudimentary way.

The progress of language could not be represented by a straight and continuous line; it would need a broken line, returning sometimes on itself and then going on again. Even at the age when the child, by dint of many efforts, can articulate distinctly, we see the inarticulate sounds reappearing; in the same way, the unconscious prattling when he can already say a few intelligent words; the monologue when he can carry on a dialogue to a certain extent; and still the incapacity to repeat or to understand certain words when he has imitated and interpreted more difficult ones. All is tangled and confused in the child's progress in acquiring the language. The different faculties interested do not progress at the same pace. For instance, the material mechanism of speech may still be very imperfect when the intelligence has advanced to a state of appreciating many words.

III

It is an interesting argument, and one that contains a great deal of truth, by which philosophers claim that the child is not merely a parrot repeat-

ing the words that he hears; that in the acquisition of language he does not proceed exclusively by imitation, by "echolalia," as the Germans say;* that he shows a certain initiative in the invention of the first words that he uses; and finally, that before borrowing the language of his parents, he has, to a certain extent, a language of his own.

It is hardly necessary to say how important a demonstration of this sort would be for the philosophy of language. If it were shown that the child is capable, to any extent whatever, of finding by himself the verbal expression of his thoughts and of his feelings, there would be no longer any motive for holding that it has been otherwise with the origin of humanity. The work of invention, which every little child shows us, would be only the image, the distant and weakened remembrance, of the primitive evolution that has created the language. The two theories—credited turn by turn, one of which represents the language of speech as a miracle of divine revelation, the other as an artificial creation of reflective reason—would be equally contradicted. The solution of this question is not the only service, but it is one of the most important services, that the psychology of the child can render to the philosophy of the human mind.

It is to French philosophers—to Rousseau, to Maine de Biran, to Albert Lemoine—that we must give the honour of having first divined or estab-

* "Echolalia," properly speaking, consists, chiefly, in the repetition of the last syllable of words heard.

lished the spontaneity of the child in the matter of language. It is French writers also that have corroborated the opinion of their forerunners by exact observations.

As early as 1753 Rousseau wrote: "The child having all his needs to explain, and consequently more things to say to the mother than she has to say to him, it is he who ought to resort most to invention, and the language that he uses ought to be in great part his own work."* Rousseau trusted to a somewhat doubtful argument, and from it deduced a conjecture which by chance is in accord with the facts. He held, moreover, to his conclusion, and he returns to it in *Émile*, where he says: "Children will give you their words before receiving yours."

Maine de Biran went no further than *à priori* conjectures. He said: "Before hearing the first articulate sounds transmitted by his nurse, the child must have uttered some sounds voluntarily, and must have perceived that he was heard by others, as he heard himself; and it is only after having been heard by himself, or after having voluntarily repeated the first cries which instinct drew from him at birth, that he also becomes capable of repeating or of imitating voluntarily the first articulate sounds that he receives from without. We thus see how language can begin in a family or in a small society. Each child born in this human family has his primitive language, which he understands, and which is understood and

* Discours sur l'origine de l'inégalité parmi les hommes.

repeated by parents, whose voice or inflections the child in his turn will soon imitate." *

Very different, on this question, is the method of contemporaneous psychologists, who appeal, not to hypotheses, but to observation and to facts. In 1865, in his ingenious essay, *De la physionomie et de la parole*, Albert Lemoine set forth very clearly, although under a too general form and not without some exaggeration, the creative part of the child in forming language. "Nobody," he said, "can tell, as if returning from a voyage to Eden, how man spoke for the first time; but we can observe every day how a man begins to talk. The child does much more than we think for the language that is taught him; he is half-way an inventor, while we believe that we give him the language complete. See him when the organ of speech, still perplexed, does not obey his weak will; already, however, he is capable of modulating a few vowels and of articulating a few consonants, which the badly regulated movements of his lips and of his tongue form by chance. He is at that critical and charming moment when he is about to enter into possession of the government of his organs, and to show his little passions by other signs than by cries. You believe that it is really his mother who teaches him the first articulate sound, the first word having a meaning; but undeceive yourself; it is the child that gives the first lesson, the mother that receives it. The first word that he pronounces and to which

* Maine de Biran, *Examen critique des opinions de M. de Bonald*, in *Œuvres inédites*, vol. iii, p. 259.

he attaches a meaning is not a word of the mother-tongue that he gets from his nurse; he is the one that makes the shapeless material into a word; he attaches a meaning to it; it is a word of his language to him, and his nurse learns this language from him before teaching him hers. This language of the child, with a vocabulary of only a few sounds, of modulated cries, of monosyllables hardly articulated, which dispenses with grammar, is the instrument that the mother will use to make him understand the artificial language of his country and his time." *

In 1871 Émile Egger, in a memoir read at the Academy of Moral and Political Sciences, and in 1876 Taine, in an article in the *Revue philosophique*, revived the same argument, founded on their personal experiences: "There is not a single one of his needs for which the child that I am observing does not invent one or more articulate sounds without any voluntary or involuntary example being given him. The intellectual work of the child is very active, and his language follows this work with a facility of invention that sometimes perplexes our wisest attention." (Egger.) "Originality, invention, is so active in the child that if he learns our language from us, we learn his from him." (Taine).

Let us now resort to facts in order to determine exactly how far it is true to say that the child invents his own language. We shall distinguish three

* Albert Lemoine, *De la physionomie et de la parole*, G. Bail-
lière, 1865, p. 148.

series of cases in which the child's spontaneity of expression is more or less revealed.

1st. The child produces the sound or the word by himself, but it is the parents who give a meaning to the syllables that he has articulated without really intending to do so.

2d. The child at the same time invents the word and fixes the meaning of it: this is the most curious, the rarest, and also the most controverted case.

3d. Finally, in other cases, and very frequently, the parents furnish the words, and the child, who repeats them, interprets them in his own way and employs them with new meanings.

In other words, allowing that language includes two essential elements, a material sign A, an intellectual signification B, the child sometimes invents only A; sometimes finds at once A and B; sometimes A being suggested, he imagines B.

1st. From the first months, as we have seen, the child is capable of emitting various sounds. These sounds can be distinguished sometimes in the midst of his cries. On the sixty-fourth day, Preyer tells us, the syllable *ma* was heard while the child was crying. At other times, and more and more in proportion as he grows, in his moments of calm or of comfort, the child gives himself up to this chattering, this bird-chirping that we have already described. At first it is only a succession of indistinct sounds, from which is detached, as by chance, a distinct syllable. On the forty-third day, Preyer heard the first consonant pronounced. The child was lying comfortably, and uttering sounds of every

sort, impossible to fix, but he said clearly *am-ma*.* Later, there are real monologues, in which the child prolongs indefinitely the emission of vocal sounds, to which he attaches absolutely no meaning. He seems to amuse himself with his own voice; he takes pleasure in exercising the organs of speech, just as he loves to move his arms and his legs. "We think that he talks," says Droz; "he simply makes music." All this indefinite flow of articulate syllables which he repeats, and which he varies with an inexhaustible facility, all this is only noise; purely automatic motions which the child has no idea of making use of, which have no value as signs, and in which there is mingled not the least bit of thought or of voluntary expression.

Still, these elementary sounds, of which it is difficult to determine the order of succession, could not be considered as the simple repetition of sounds heard by the child. Of course there could be no question of a voluntary imitation, which will not be produced until much later; Preyer says that he did not observe a single instance of it until the eleventh month.† But it does not seem that volun-

* The Development of the Intellect, p. 102.

† Darwin, it is true, believes that he recognised, from the hundred and eighteenth day, that his child was beginning to try to imitate sounds. But Romanes states categorically that the first articulations of the child do not result from imitation. "Infants usually begin with such syllables as 'alla,' 'tata,' 'mama' and 'papa' (with or without reduplication) before they understand the meaning of any word. One of my own children could say all these syllables very distinctly at the age of eight months and a half, and I could detect no evidence at that time of his under-

tary imitation, whose importance we do not wish to deny, could suffice to explain the emission of these first sounds, as the voice explains the echo. Doubtless all is not spontaneous in these first stammerings; a syllable that the child has heard more distinctly, which is frequently pronounced around him, has every chance of being mechanically reproduced and of becoming one of the preferred utterances. The vocal spontaneity of the child is none the less incontrovertible. We could not fail to see that his cries have a different character according as they result from one feeling or from another. "After some time," says Darwin, "the nature of cries changes, according as they are produced by hunger or by other suffering." Moreover, there can be no doubt that the child's voice has its favourite, and, so to speak, its privileged articulations.* At the age of five months and a half, Doddy formed the articulate sound *da*, but without attaching any meaning to it. "From the forty-second week on," says Preyer, "especially the syllables *ma*, *pappa*, *appapa*, *babba*, *tata*, are frequently uttered." Note, moreover, that

standing words or of his having learned these syllabic utterances by imitation. Another child of mine, which was very long in beginning to speak, at fourteen and a half months old, said once, and only once, but very distinctly, 'Ego.' This was certainly not said in imitation of any one having uttered the word in her presence, and therefore I mention the incident to show that meaningless articulation in young children is spontaneous or instinctive." (Mental Evolution in Man, p. 122.)

* Albert Lemoine is wrong in believing that the linguistic spontaneity would vary sensibly from family to family, from child to child.

the efforts made at the same time to induce the child to repeat syllables pronounced before him fail utterly. Preyer notes also the sounds *tai*, *atai* as "undoubtedly spontaneous."

In other words, the child finds, at least in part, the material for his language in a sort of natural inspiration. Is it by virtue of the law of the least effort, as Buffon thought,* that he emits certain sounds rather than others? Is it because of an innate and hereditary tendency?† Whatever the reason, it makes little difference. The explanation of the fact remains doubtful; but the fact itself is assured. If *papa* and *mamma* are with slight variations the child's names for father and mother, in so many different languages, it is because the syllables that compose these two words are precisely those that the child has most inclination to utter instinctively. How does this happen? On the one hand, the child in his intelligence, in his imagination, rather, has vaguely conceived the idea of his father and of his mother, an idea purely representative, which is no more than an image, the remembrance of the material forms that characterize each of his parents and of the impression that their actions have left in his mind. On the other hand, he repeats very often, but without putting any expressive intention into them, the syllables that are

* Buffon, *Œuvres complètes*, Paris, 1878, vol. iv, p. 68. Buffon believed, moreover, that the child owes his language to his mother.

† Preyer (*Development of the Intellect*, p. 217) suggests that the order of the evolution of vocal sounds depends on the power of the brain, on the teeth, on the dimensions of the tongue, the acuteness of hearing, etc.

destined to become the verbal signs of these ideas and these images. Now it is necessary that these two evolutions, parallel but distinct and independent, should be joined and mingled. It is the mother or the father who will make sure the transition, who, taking from the lips of his son the word all formed, but without life, will repeat it insistently before him in the right connection, before the person he is to designate, and who, suggesting thus little by little the relation, the association that he is to be made to learn, will give to the sound all the value of a sign. "Papa," says Taine, "has been pronounced more than fifteen days, without intention, without meaning, as a simple prattling, as an easy and amusing articulation. It is later that the association between the name and the image or the perception of the object is made definite, that the image or the perception of the father calls to his lips the sound *papa*, and that this sound pronounced by another definitely and regularly calls up the remembrance, the image, the expectation, the seeking for the father."

2d. If it is established, as we believe it is with the majority of psychologists, that the child himself puts into circulation, as it were, that he invents and repeats certain words, to which the traditions of the mother tongue must give a meaning, the meaning immemorially agreed upon, it is much more difficult to show that he can accomplish this double operation by himself—that is to say, make a complete work of creation in point of language, by inventing words to which he himself gives a meaning.

Taine is very positive on this point, but the examples that he cites, apart from the fact that they are not numerous, could not be admitted without question. In the fourteenth month the child that he observed pronounced invariably the word "ham" in the presence of nourishment;* later, this articulation was reproduced whenever the child was hungry or thirsty. Taine explains very ingeniously that this "ham" is the natural vocal movement of one who snaps up anything. "The sound begins with an aspirate guttural, then follows a barking, and the syllable ends with the closing of the lips, executed as though the food was about to be seized and devoured. A man would probably follow this plan if, among savages, his hands bound, and having no other way to express himself than by his vocal organs, he wished to say that he would like something to eat." For Taine's supposition to be really established, it would be necessary, it seems to us, that this "natural vocal movement" should be found in all children. But this is not so. A child that we observed said *nana* in the same sense. Doddy, when a year old, tried to invent a word to designate his food, and called it *mum*. "But I do not know," prudently adds Darwin, "what led him to adopt this syllable."† At twenty-one months, to

* On this point my personal observations are contradictory; one of my sons said *am* of his own accord when he was hungry or thirsty. And note that I had not read Taine at this time. Another, on the contrary, between the eighteenth and the twenty-fourth month did not show any originality in his language; he had no word of his own, except words that he had mutilated.

† Preyer observed an analogous word with his son; he said

designate food, Axel often said, with a supplicating, untranslatable intonation, *mimi*. Does it not seem that this variety of sounds used by the child may be the result of the fact that there is here only a mutilation, a deformation, of words that the child has heard and arranges in his own way, rather than a really new formation? It is in great part because he cripples his words, because he repeats awkwardly the words that are suggested to him, that the child seems to have his own particular language. Moreover, he is encouraged and upheld in the use of his childish idioms by the way parents and nurses have of pleasing, of flattering, so to speak, his quasi-philological vanity, in adopting and repeating after him these disfigured words. It is, then, from the weakness of his organs, from the uncertainties of an articulation ill-assured, of bungling imitations, rather than from a real inventive originality, that the creations too favourably interpreted by Taine might result. Thus *ham* could well be only an abbreviation of *manger* (to eat);* or, as Preyer suggests, the echo of *faim, as-tu faim?* (hungry—are you hungry?) So *mimi*, pronounced by Axel, might be only an imitation of the German word

mömm when he was hungry, and that from the sixteenth week. A child observed by Fritz Schultze, of Dresden, said *mäm, mäm*, in the same sense. Preyer supposes that this word comes from the primitive syllable *ma*, and that the child uses it because he has often heard "*mamma*" when nursing.

* We must notice, in any case, that the infant, to speak properly, does not *eat* or *snap up things*, as Taine supposes, but that he *sucks*; and that the noise that may be made in eating—*ham*, perhaps—does not in the least resemble that made in sucking.

milch (milk). A fact tending to confirm this supposition is the use that Doddy made of his *mum*; when he applied it to sugar, he said "Shu mum," and a little later, to designate liquorice, he said, "Black shu-mum." The two other words were derived by imitation; it is logical to suppose that the first has the same origin. It is the same thing with another word that the child observed by Taine repeated frequently—the word *tem*, to mean *give, take, here, or look*. Taine himself points out that there might be here only a derivation from the word *tiens* (hold), which the child had often heard pronounced with an analogous meaning.

We cannot deny that the child's verbal imitation is no longer what it may have been, what it must have been, in the case of primitive man. It is not, as in the beginning, called forth by the need, by the necessity, of finding, unaided, the signs necessary to entering into relation with other men.* The inventive faculties are reduced almost to inaction by the teaching of a language all formed, which sounds in the child's ears from the time of his birth, and also by the complacency of nurses, who, in order to help him acquire the language, choose the easiest sounds, those most appropriate to his imperfect organs. An observer among our friends tells us of a child who designated one of the most fre-

* Romanes calls attention to the fact that there is a great difference between the psychological conditions in little children and in primitive man. The child has language supplied from without, and has only to learn it; primitive man did not receive language, but had to make it. (*Mental Evolution in Man*, p. 365.)

quent needs at this time by a little whistling, repeated, *zi-zi*. But he had not invented this sign; he got it from his nurse, who had doubtless found some analogy between the thing and the sound.

Is it necessary to admit also Preyer's absolute conclusion, that a child never invents a word of determinate and precise meaning without falling back upon the imitation of the sounds that he hears, and that he never employs elementary words to express his ideas without his parents having had some part in the work? * Surely we cannot think of holding that any child comes into the world with a genius sufficient to discover articulate language; but however large a part it is necessary to assign, either to imitated sounds in the special words of the child's vocabulary, or to the suggestion of parents in the significative application of these words, it seems to us by no means demonstrated that the child has not some rights of the inventor to claim, whether in the way that he arranges—if only in deforming them—the materials that are furnished him, or, above all, in giving by himself some definite meaning to an articulation previously employed without any expressive intention. This is really the whole question. The introduction of a meaning into a sound up to that moment insignificant and inexpressive, this is the

* This is the opinion also of Mme. Necker de Saussure: "The child does not invent words by himself; he only repeats, sometimes well, sometimes ill, those that he has heard pronounced. He does not even call an animal by its cry, unless some one has given him an example to imitate." (Education Progressive, vol. ii, chap. ii.)

very key to the acquisition of language. Is it proved that the child never makes his way here without the direction of his parents? By no means. The intervention of parents is perhaps necessary for this delicate transition to be made the first time; but when the first impulse has been given, there is no doubt but that the child is capable of fixing spontaneously, as he understands it, the meaning of words more or less original, more or less imitated, which he has used at first unconsciously.

What there can be no question about, what Preyer himself admits, is that the child—still imitating it is true, but imitating spontaneously, the cries of animals—creates onomatopœias, which immediately become for him the names of these animals. In this case, the idea and the word come simultaneously to his mind and to his lips. The word *bow-wow*, which designates the dog, is doubtless most often taught to the child by his nurse, who makes it her duty to teach him not only the official language, but also the little *patois* that belongs to childhood. But who can say that the word is not also often invented by the child, when he hears frequently the barking of dogs? Preyer cites as examples of instinctive onomatopœia, *koko*, *kiki-riki*, *pipiep* (bird), *tic-tac* (watch), *hü-üt* (whistle of a locomotive).*

Another fact that we cannot question is, that

* At twenty months, Axel, seeing a redbreast in the garden, looked at it attentively, and tried several times, with some success to imitate its chirping. (The Development of the Intellect, p. 135.)

interjections, which, it is true, form part of the child's natural language, and which are only articulate cries, become very early the intentional expression of such or such emotion. At fifteen months, Tiedemann's son said very clearly *Ha! ha!* to express his astonishment. Tiedemann suggests that this *ha* is the natural sign of reflection, of surprise; that it results from the sudden expulsion of the breath. Whatever may be the truth of this, it is certainly true that the child animates, and, so to speak, intellectualizes his interjections—that is to say, he makes use of them as names, the sounds that naturally express his states of sensation and of emotion.

If it were necessary to cite a decisive experience in order to establish the thesis of the spontaneity of expression in the human race, we might call to witness the education of Laura Bridgman, the blind woman that was also deaf and dumb, who died recently. According to the report of Dr. Howe, Laura had at her disposal to designate her friends and the persons she knew intimately, about fifty vocal signs, instinctive articulations—a burst of laughter for one, clucking for another, a nasal sound for a third, a guttural sound for a fourth. Can we not see here, with a force accentuated by the deprivation of the senses, the expressive power that consists essentially in attributing a meaning to a vocal sign? Here, indeed, there is no possibility of imitation, and it seems probable that if the child were not immediately stopped in his efforts at spontaneous expression by being taught the traditional language, he would end by making a language for himself.

It is proved that when placed in exceptional and favourable circumstances, children show a more marked linguistic originality than is ordinarily found. Some one has told of twins who loved each other dearly and lived, so to speak, absorbed in each other. As a result of this society, they invented a particular language which had no relation to the language of their parents. They said neither "papa" nor "mamma," but had their own names for their mother, their father, the carriages that passed their door, and so on. They spoke to each other with the vivacity and the volubility commonly found at this age, but with a German accent (they were of German origin). They used only words that were incomprehensible to their parents.* Another observation of the same kind is that of a little girl who, English by birth, but aided perhaps by the remembrance of some French words heard by chance, made up for herself a language that had an evident resemblance to the French language. In this language of hers there were almost no traces of words formed by the imitation of sounds. The "mewing" of a cat perhaps suggested the word *mea*, which signified both "cat" and "fur." But no origin could be found to explain the other words that this child used. She had a brother, eighteen months younger, to whom she taught her language, so that they conversed freely together without being understood by any one around them.†

* Horatio Hale, in the Proceedings of the American Association for the Advancement of Sciences, vol. xxxv, 1886.

† Horatio Hale, *op. cit.*

3d. Although very limited from the point of view that we have just been examining, the child's inventive force takes its revenge when it is a question of extending, of generalizing, of varying the meaning of words that he takes ready-made from the language of his parents, or of those that he has made himself. Preyer recognised this: when once a first association has been established, by suggestion or instinctively, between a notion and a syllable, the child easily finds new associations by himself.*

We cite a few examples out of a thousand. A child that was beginning to talk, says Romanes, quoting from Darwin, saw and heard a duck on the water, and said "Quack! quack!" From this moment he employed indifferently the same word—"quack, quack"—to designate the water, all birds, all insects, all liquids, finally even pieces of money, because on a French *sou* he had noticed the image of an eagle. Another example: A German child twenty-one months old first used the interjection *ai* as a cry of joy; he modified it in *aiz*, in *aze*, and finally in *ass*, to designate his wooden goat mounted on wheels and covered with hair; *aiz* was afterward reserved as a cry of joy, and *ass*, signified everything that could change its position—animals, his own sister, the carts, everything that moves, everything that has hair. *Ban*, in the vocabulary of an English child, meant "soldier," but on seeing a bishop with his mitre and his priestly vestments, the child applied this word to him. To the same child, *gar odo* signified "to go after the horse," but when the

* Preyer, Development of the Intellect, p. 215.

father wanted a carriage and wrote an order for the servant that went to the stable, *gar odo* became a synonym for paper and pencil. "The first word that my son learned after *papa* and *mamma*," says Romanes, "was *star*; he applied it afterward to all shining objects—candles, gas-burners, and so on."

Notice also the interesting observations of Taine. A little girl of two and a half years wore a blessed medal around her neck. Some one had said to her "C'est le bon Dieu" (It is God). One day, when seated on her uncle's knee, she took his eye-glass, saying, "This is my uncle's *bo Du*." The word *fafer*, coined by a little boy a year old to designate the railroad (*chemin de fer*), became the name for steamboats, for spirit coffee-pots, for all objects that whistle, that make a noise and throw out smoke. "Another instrument," adds Taine, "to which children have a great objection (excuse the detail and the word—I mean a *clysopompe*) had, naturally enough, made a strong impression on him. He had termed it, from its noise, a *zizi*. Till he was two years and a half old, all long, hollow, slender objects—a scissors-sheath, a cigar-tube, a trumpet—were for him *zizi*, and he treated them all with distrust."*

All the words of the child's language, indeed, are thus bent to many uses by a need of expression which is not aided by a proportionate elocutionary power. "Papa" designates all men; "mamma," all women. "Cola" (chocolate) is the name for all dainties, "koko" the name for all birds.

* Taine, *On Intelligence*, Book I, chap. ii.

These indiscreet crude generalizations doubtless result in the first place from the poverty of the child's language. The child is like a person who, not having many dishes, eats all the courses of a dinner on one plate; he forces several meanings into one and the same word. We might find many analogous examples in the imperfect language of primitive peoples; thus, the Romans called elephants "Lucanian bulls." *

But it is not only reasons of economy, and of forced economy, that direct the child; if he makes words of one meaning answer for another, it is because he has a particular aptitude for grasping relations between things that escape even the niceties of the intelligence of a mature man, a marked propensity to generalize; thus, he contents himself with comparisons which the reason of a man would discard immediately. Chance associations, accidental and superficial associations, rule, as we have seen, in the child's imagination.

From the facts that we have cited, we see that the child gives proof of a certain spontaneity in the preparation of the language of speech; but not that, if thrown on his own strength alone, he would be in a state to invent an entire language for himself. The fact that deaf-mutes do not speak, and this because they do not hear, suffices to disprove the thesis of the absolute lingual spontaneity in man, and to show the considerable part of imitation. It is well, however, to call attention to the fact that the incapacity of the deaf-mute does not

* Egger, *op. cit.*, p. 45.

result only from his not hearing the speech of others, the cries of animals, and all other sounds of Nature without; it results also from his not being able to hear himself because the articulations which he can pronounce do not strike his ears. If the normal child comes to separate spontaneously a few intelligent words from his natural chattering, to make the sounds that instinct or heredity has placed on his lips mean something, it is because he can hear them, and having heard them, can use them to express this or that.

It is none the less true that in the social conditions in which the child is called to live from the time of his birth, imitation of the language of others plays the largest part; experience is almost sovereign. Instinct, heredity, personal invention, have only a very restricted action. The child's effort to repeat the syllables pronounced before him is never shown until towards the tenth or the twelfth month, but it is just then that he begins to speak.* Even those who believe most in the activity of the child recognise the fact that this activity is aided by a natural tendency to reproduce the sounds of Nature, to imitate the cries of animals. Onomatopœia is only imitation. Moreover, if it is in the child's power to translate in his own way the sounds that he hears, to imitate, for instance, the noise that a clock makes when being wound, why should he not be led to imitate the artificial sounds

* Preyer says that in the eleventh month certain syllables that were pronounced before the child were for the first time repeated by him.

of the conventional language which is being spoken constantly in his ears ?

This instinct of imitation is so strong that long before he is capable of forming difficult articulations involved in the pronunciation of ordinary words, the child tries to do it. He imitates, in a way, before he really can imitate.* The first words that he uses witness at once his voluntary effort and his weakness. Different observers have noted the child's efforts in this direction from day to day.† "At twenty-two months, a child observed by De la Calle said *cou* for *clou* (a nail), *otta* for *ôte toi* (be off), *cloute* for *croûte* (crust), *anoir* for *armoire* (cupboard), *moussoir* for *mouchoir* (handkerchief), *faguégué* for *fatigué* (tired), *la-lo* for *là-haut* (up there), *gouazelle* for *mademoiselle*, *ac quelocque* for *enveloppe*, *peterre* for *pomme de terre* (potato), and so on. The same defects of articulation are found in all children. At eighteen months the child studied by Pollock does not pronounce *g l r*, nor the sibilants, nor the aspi-

* The child hears us say *confiture* (preserves), *armoire* (cupboard); perhaps he has already pronounced a thousand times the syllables that form these words, but the act of pronouncing them has not come under the reign of his will. He wishes to reproduce them but cannot" (Egger, *op. cit.*, p. 201). Preyer says that he took a great deal of trouble to get his child (eleven months old) to repeat vowels and syllables, but that he never succeeded in these efforts. If he said "papa" very distinctly, the child responded "ta-tai." (The Development of the Intellect, p. 117.)

† See, for instance, in Mind, vol. iii, 1878, p. 392 *et seq.*; the studies of Pollock on the Progress of a Child in Language; De la Calle, La Glossologie, Paris, 1881; also Schultze, Die Sprache des Kindes, Leipsic, 1880.

rates. The pronunciation of the consonant *r* is particularly difficult for the child. The weakness of his organs shows itself in the fact that for some time his language does not go beyond the monosyllabic forms. His dissyllables, *papa*, *mama*, are formed only by the repetition of the same sounds. In the words composed of two different syllables, he retains only one. A little girl whose progress was noted by Perez, towards the twenty-second month could say only *bou* for *tambour* (drum), *fé* for *café* (coffee), *yé* for *Pierre*. A little while afterward the same child went so far as to pronounce *abou* for *tambour*, *ateau* for *gateau* (cake).” *

We should never end if we tried to note all the changes that the child's inexperienced tongue makes the words that he repeats undergo. Moreover, it is not by chance that the child produces these mutilations, which result from the play of the organs, from the articulatory apparatus, from its still difficult action, more than from an imperfection of the acoustic faculties. Philologists like to show that natural laws preside over the apparent disorder of these crippled words and awkward articulations. The clumsiness of the childish language corresponds to analogous phenomena found in the history of languages. Egger, for instance, calls our attention to the fact that the child will say *crop* for *trop* (too much); *cravailler* for *travailler* (to work); so from the Latin *temere* has come the French verb *craindre* (to fear). “The ancient

* Perez, *op. cit.*, p. 297.

Egyptians," he says further, "seem not to have distinguished clearly the letter *l* from the letter *r*; and the Chinese refuse absolutely to pronounce the latter. This strange phenomenon is often reproduced under our very eyes, in Europe. Some of our children often interchange these two consonants, and close attention is necessary on the part of parents and masters to make them pronounce *l* and *r* only where the traditions of the language have established them."*

However natural the language of speech may be, it is evident that only the work of time has succeeded in organizing a complete language. It is not surprising, therefore, that the child has trouble in learning the language of his parents, and that in his individual evolution of a few years it is difficult for him to appropriate the result of an evolution that has lasted for centuries. The child actually learns to speak; on this point more than on any other, it is necessary that the teaching of the language should perfect what by himself he is only rough-sketching. The child is a pupil long before he goes to sit on a school bench; he is a pupil studying language from the first minute of his existence. What he brings from within himself is

* Egger, *op. cit.*, p. 49. Schultze, in calling attention to the fact that labials and linguals are the first consonants pronounced, suggests that this is not only because they are the easiest in themselves, but because the muscular apparatus of the lips and the tongue have been the first exercised in the act of nursing and sucking. He states, moreover, that in the progressive development of his language, the child always obeys the law of the least effort.

insignificant by the side of all that education furnishes him. His spontaneous inventions are, as it were, an obstacle; they retard more than they favour progress in taking complete possession, for they make it necessary for the child to unlearn his own language before learning ours.

IV

It is not only in the acquisition of the ordinary words of the language, it is also in the grammatical work of the formation of words, of the construction of propositions and of sentences, that the child's inventive instinct finds itself, up to a certain point, in opposition to the efforts needed in learning the ordinary language. Nowhere better than in the evolution of language does this secret logic show itself; it early rules the child's intelligence, sometimes aiding and upholding it in its efforts, sometimes, on the contrary, troubling and impeding it, by putting it in opposition with what there is of illogical, conventional, or artificial in the creations of the human mind.

We shall show how this innate logic makes the little child a born enemy to grammar, just as later it will make war exist between him and certain rules of orthography.

Even in the invention of new words, of barbarisms which often adorn the child's language, we have to recognise the action of analogy. When once put in possession of a few words, the child is prompt to imagine others by derivation from these. Speech calls forth speech. Words engender words, by a sort of sprouting out; and in language as in

everything else, we might say that it is only the first step that costs. But these words invented by the child are almost always logically invented. Children will say, for instance, *déproche-toi* for *éloigne-toi* (go away). George amuses himself in the garden by killing the slugs that devour his flowers. "I am," he says, "a *limacier*" (*limace* being the French for *slug*, so a *slugger*). With this termination *ier* he coins a substantive by resemblance to the words that he has already used: the *voiturier*, one who is occupied with *voitures* (carriages); the *limacier* is occupied with slugs—to kill them, it is true, but the slightest analogy suffices. Egger relates a similar example. "Emily sees a hoop (*cerceau*) broken and demands that it shall be taken to the '*cerceaunier*.' I write as well as I can the word that she coins in attaching to *cerceau* the termination that she has noticed in *charbonnier* (coal-man), *cordonnier* (shoemaker). Do not laugh at this barbarism; has not custom adopted many of the same sort? Is *ferblantier* (tinman) formed more regularly from *fer blanc* (tin), *cloutier* (nail-maker) from *clou* (a nail), *ergoter* (a quibbler) from *ergo*, *printanier* (vernal) from *printemps* (spring)? In accepting these words grammarians and lexicographers uphold the authority of popular speech." *

Indeed, it is the grammarians who have the last word with the child, but before accepting the rules

* Egger, *op. cit.*, p. 45. The same author cites the following fact: "One morning I asked my son, who had a cold, if he had coughed (*toussé*). He answered that he had not heard the *tousse* come."

that they impose on him, the child debates a long time in his resistance, and sets up, in opposition to custom, the inspirations of his free and adventurous logic. One of the children observed by Egger, remembering that *rendre* (to give back) has the past participle *rendu*, said *prendu* for participle of *prendre* (to take), the participle of this verb being *pris*, *eteindu* for participle of *éteindre* (to extinguish), the participle of which is *éteint*. Others insist on saying *à les* for *aux*, the former being literally "to the" (followed by a plural noun), and the latter being the form really used in French. So Laura Bridgman wrote *eated* for *ate*, *seed* for *saw*. I had some trouble in teaching a child of three years that the plural of *cheval* (horse) is *chevaux*; one day a troop of cavalry was passing on the street, and the child called out to me, "Oh, papa! there are soldiers *à chevaux*" (the usual form in French for horseback is singular, *à cheval*). So the child's logic routed my grammar. This natural logic is so powerful that Max Müller thought himself justified in saying: "Children purify the language; they have eliminated little by little a great many irregular forms."*

This same logic is sometimes found in the first constructions of phrases by which the child tries his own powers, although generally we fail to see in the incorrectness of his incomplete propositions anything more than the effect of his poverty in the matter of words. Towards the end of the second year, according to Preyer, appear the first attempts

* Max Müller, *Lectures on the Science of Language*, i, 66.

at grammatical construction by the joining of a substantive and an adjective.* "At twenty-eight months," says Egger, "my son knew the meaning of three words: *ouvrir* (to open), *rideau* (curtain), and *pas* (not); he put them together with a certain dexterity, accompanying them with a gesture and the monosyllable *ça* (that or there). '*Pas ouvrir ça*' signifies 'the window is closed'; '*pas rideau ça*' means 'the window has no curtain.'" The use of the negative is very interesting. In all we find the same way of going about it. They will say "Papa no," "Mamma no," to signify "This is not papa," "This is not mamma"; "coffee no" to mean that there is no coffee. The same use of the infinitive, too, is usually found in all. The child has a great deal of trouble in learning the moods, still more than in learning the tenses,† and this above all in the conjugation of the irregular verbs. "The majority of Axel's sentences, towards the twenty-eighth month, are composed of only two words, of which one is usually a verb in the infinitive." At twenty-two months Tiedemann's son began to put several words together to form a sentence composed of a verb and a subject; but he always used the infinitive, not the imperative.‡ Moreover, the child will say *vienéz* for *venez* (come) from his remem-

* In the preceding chapter we have studied the reasons for the child's hesitation in using the verb *to be* in the little propositions that he forms.

† "At two years and seven months," says Egger, "my little niece Martha used quite regularly the modifications of tense, but she was still ignorant or awkward in the different moods."

‡ He always omitted the article.

brance of *je viens* (I come). A little boy cited by Legouvé said, "I hide it [an album of flowers] because if the bumblebees come [*viendront*, future; whereas the usual French form would be in the present] they will eat the flowers."*

The study of the language of deaf-mutes, of those who by new methods have been taught to speak, and who succeed in articulating by imitation of the movements of the tongue and of the lips, because they read the words on the mouth of those who can both hear and speak, seems also to show that in the child's construction of sentences, in his instinctive syntax, he obeys a natural logic, which mocks at the artificial and studied order of the language of adults.

Nothing is more peculiar in appearance, or more rational at bottom, than the inversions natural to the deaf-mute, when he writes as well as when he speaks. At the end of several years of study, a deaf-mute, having to tell the striking events of the week, wrote in his journal: "M. Grévy président plus, parti, autre remplace, s'appelle Carnot."* (Translated literally this would read: "M. Grévy president [no] more, gone, other takes his place, called Carnot.")† One of his comrades, who was more advanced in his studies, expressed himself thus: "M. Grévy n'est plus président de la République, un nouveau président le remplace qui s'appelle Car-

* Legouvé, *Nos filles et nos fils*, p. 4.

† Another example: To say "Bertrand is as tall as a giraffe," a deaf-mute would say "Bertrand giraffe as tall," the two objects to be compared presenting themselves first to the mind, then the quality common to them.

not." (Grévy is no longer president of the Republic, a new president has replaced him, who is called Carnot.)

In the two cases, with more or less correctness, the order followed is that of the succession of events, or, what amounts to the same thing, of the generation of ideas. A deaf-mute would never say or write of his own accord, "M. Carnot has replaced M. Grévy." No, he expresses the facts in the very order in which he sees them occur; he notes successively the different phases of the event.* From this principle also—and this characteristic is not peculiar to deaf-mutes, as Goguillot wrongly believes; it is common to all children—results the multiplicity of details, the prolixity of analysis, when one abstract generic word would suffice to express the same thought. Instead of saying "I have washed my hands," the deaf-mute exclaims: "I have turned on the faucet from which flows the water to wash my hands." He will not content himself with this brief proposition: "I lack the means of subsistence," but will write, "I have no bread; I have no money to buy any; I find no work to earn any money." So the child's intelligence, and consequently his language, is instinctively led more to analysis than to synthesis. Who, in listening to a child telling of an event he has seen, has not been struck by the talkative diffuseness of the little narrator, by the overweight and accumulation of de-

* We borrow these examples from the very interesting book by Goguillot, *Comment on fait parler les sourds-muets*, Paris, Masson, 1889, p. 296.

tails that prolong his recital? Is this not one of the secrets of the art of writing for children, to know how to avoid abstract and general expressions, the words that sum up and condense, and to multiply, on the contrary, the picturesque words, the details and the particulars?

Whatever may be the child's awkwardness of expression and his tendency to coin his own constructions, he loses no time in entering into the current of custom, under the incessant action of the language that is spoken around him. At twenty-eight months, Axel used correct propositions; he used the article. Other children are still more precocious, and there is nothing surprising in this, for at this age the propositions uttered by the child have for the most part nothing personal in their form. The child repeats, above all, the sentences he has heard, even sentences in a strange language. He uses memory almost alone in play, and we know that the literal memory towards the age of three has a surprising force. It is the parrot age, when the child unceasingly repeats the same sentences, in a way, learned by heart. It is not really certain, moreover, that he understands all the words that he uses. The adverbs, also the conjunctions, remain for a long time mysterious, obscure things for him. Doubtless he very soon understands "More! more!" when, for instance, he demands that a game shall be continued. "A little," "much," enter as promptly into his vocabulary, but "almost," "too," "never," "always," and a great many other adverbs mean nothing to him until a little later.

Many other questions would be interesting to

study in this connection. For instance, how does the child, little by little, come to employ first direct objects, then indirect objects? At twenty-two months and two days, the child observed by Pollock said: "Anna, give baby sugar."* Imitation, first of all, explains this progress. Many grammar lessons will be necessary to explain to the child that he has made, without knowing it, a logical analysis. What will take still more time will be his emancipation from the childish phraseology. He will come only with difficulty to construct sentences in his own way, propositions of which the model has not been given him. This statement will not surprise any one who has had to direct beginners at schools in their first efforts at elocution and composition.

I am far from having analyzed all the operations included in getting command of a language. How many delicate transitions, how many difficult passages in this natural evolution, which begins on the first day and lasts at least two or three years! How many little acquisitions every day, little progressive conquests! One day an articulation will appear, clear and distinct, a pure and limpid sound that reveals the human voice. But what a long time it will take for all the sounds of the alphabet to be learned! Another day appears the desire to imitate words that are heard; but how many efforts must be made before the result will correspond to the intention, before the child will be able to repeat correctly what he hears! There is

* Pollock, *loc. cit.*, p. 399.

a moment, also, when the child shows that he has finally grasped the association of some object and some sound; he proves it by showing the object and performing the motion that responds to his utterance. But he is still far from the day when he will no longer be contented with gestures and motions to indicate that he understands this relation, when he will pronounce by himself, almost, the right word. When he has begun to understand the signification of words, he will not enter into possession of his little vocabulary at one bound; he will learn one word to-day, another to-morrow; he will slowly explore the unknown country that he has entered, discovering something new each day. But weeks, months, will roll by before he can manage not only concrete terms, which represent material things, but the expressions, much more difficult to grasp, that correspond to moral ideas, and next to abstract and general ideas. "Language," says Max Müller, who wished to mark very forcibly what an advantage speech gives to man over the animal—"language is the Rubicon of the mind, and the animal is incapable of crossing it." The image is expressive, but as far as the child is concerned, language is not the only Rubicon to cross; there is rather a multitude of little streams that he must cross, one after the other, by successive bounds, before he can reach the promised land.

CHAPTER IV

THE VOLUNTARY ACTIVITY: WALKING AND PLAY

- I. The child's voluntary activity.—Different degrees of will.—The motor idea.—The choice between several desires or several motives.—Involuntary and voluntary inhibitions.—Will, independent of movement.—The same motions are successively instinctive and willed.—The first voluntary movements of the child.—Imitative and expressive movements.—Does keeping the head straight depend on will?—The part of will in the acquisition of language.—Proofs of good and of bad will.—Will in the co-ordination of movements.—Weakness of will in the child.—Hypnotism. II. Learning to walk.—The solidity of the bones and the strength of the muscles.—Learning to stand.—Variations in the date of the first step.—The rhythm of walking determined by instinct.—Exercise.—Moral influences.—The part of will.—Walking retarded in the case of idiots. III. Play.—The child plays before he can speak or walk.—Precocity of the instinct of play.—Importance of play in the child's life.—Imitation an important principle of play.—The part of the feelings: the social feelings and affectionate feelings.—Playing with a doll.—Military games.—The part of intelligence in play.—Instinct of construction and of destruction.—The voluntary activity in play.—Play is a study.

I

THE child's voluntary activity is exercised above all in motions, in gestures, in the expressive signs of the physiognomy or of language. The happy age of childhood does not yet know the struggles

nor consequently those long and complicated deliberations from which come inner resolutions, decisions at long range, so to speak, which remain or can remain a long time in the state of purely mental decisions. Usually the child's will shows itself by the immediate execution of the act. His reflection is short; his resolutions allow no delay; the effect follows the volition immediately. If we analyze carefully the causes that give the child's will this prompt and impetuous character, we shall be convinced that it results above all from the small number of ideas at his disposal. Behind a voluntary act, in the adult, there is almost always a large number of ideas in opposition one with the other, of which a single one, the motor idea, ends by ruling and taking the upper hand. The others have been compared, put in the balance with it, and, for some time at least, have suspended the final judgment and retarded its action. In the little child, however, the voluntary motion is the result of one idea; this idea is not opposed, has no struggle to undergo, no victory to gain, and consequently it draws the action on immediately. The little child's will, towards the fourth or fifth month, is not a choice between several motives. Doubtless it presupposes a motive, without which it would not be will, but this motive has not met an antagonist in a consciousness still poor and empty of ideas.

Such is the first step of the voluntary activity, more dependent as yet on the sensibility than on the intelligence, more dependent on the world of desires, of appetites, than on the world of ideas. We know with what energy the child often says

about a plaything or any other object, "I want, I want!" but this is only the expression of an ardent desire. How often even in the grown man "I want" is simply a synonym of desire!

In the development of consciousness and the progress of ideas, however, there comes a moment, towards the twelfth or the fifteenth month, in which the will is manifested. To be sure, it has not yet acquired the force and the energy that belong only to the adult will, but it comprises all its essential elements; it is a choice between several representations. When, in spite of the resistance of the sensibility, in spite of its natural repulsion, your child decides to do a thing that is disagreeable to him, in order to please you, or because he has understood that he will be rewarded, he performs an act of will in the most complete meaning of the word. He represents to himself the act to be accomplished, the motions to be performed. See him, for instance, going quietly to be put to bed; he still has the desire to be awake, to be amused, but he has been told that his bedtime has come, that his mother wants him to go to bed; he vacillates between his own inclination and the representation of his mother's command; he hesitates, if not between two reflective motives, at least between two impulses, between two desires; he finally decides, he obeys, he *wills* to obey.

Will does not consist merely in the performance of an act; it shows itself also in the refusal to perform an act. It has its negative form, so to speak, as well as its positive form. To will *not* is to will, or, to speak more exactly, the act of not willing is

still a voluntary act. The disobediences of childhood, so frequent in the first age, are also voluntary acts, willed.

There are doubtless involuntary inhibitions.* A crying child becomes suddenly quiet because he has heard a violent noise, or because an angry gesture from his mother has frightened him. Here the suspension of the act does not depend at all on the will, it is as though forced and constrained. In other cases, however, when the child, though begged and exhorted, refuses, in spite of your appeals, to hold out his hand to you, to give you a kiss, in a word, to repeat a movement that he has already voluntarily performed many times, there is in his resistance an effect of will, the deliberate inhibition of an act which he turns over in his mind, but which, by caprice, he will not consent to perform at this moment.

Even in childhood, then, will is in a way independent of movement, since it can show itself by immobility, by silence, by the suspension of a movement begun. Of course we cannot expect that a little child two or three years old will rule himself to any great extent, and resist the impulses of his successive

* Compare Marion (*Revue scientifique*, 1890, i, p. 777). It is involuntary inhibition when the child, hindered or watched, refrains in spite of himself from doing what is forbidden; for instance, when, ready to cry, he stops short, on being spoken to by a stranger; when, in the park, just as he is going to walk on the grass, he quickly checks himself on seeing the uniform of a guard. But when the child restrains himself, and of his own accord finds in his very ideas and feelings a counterbalance to his temptations, then there is an inhibition of a new kind, which is a very positive *willing*.

desires, to which scarcely anything can form a counterbalance. It is not impossible, however—and here is the secret of a liberal education, early begun—to develop from the second and third year the germs of spontaneous inhibition, that which voluntarily renounces the satisfaction of an instinctive desire, in order to conform to reason, represented for the child by the advice and the commands of parents. The child that can be guided merely by his mother's smile, and later by her mildest and pleasantest words, even when her advice is contrary to his dearest wishes, will accustom himself little by little, in his mental representations, to compare the for and the against, the pleasures that the accomplishment of an act promises him, and those that will result from abstaining from that act. And from these little reflective comparisons, as far as they can be produced at this age, will be evolved, little by little, the beginning of liberty and the first education of character.*

Philosophers who are, above all, physiologists—Preyer, for instance—seem to believe that there are voluntary movements pure and simple, as well as movements necessarily involuntary. Will, in their theory, which admits only facts, phenomena, and which proscribes faculties as chimeras invented by metaphysicians, would accordingly exist only in acts and in motions. "Many willed movements," says Preyer, "are executed involuntarily—e. g.,

* "The development of the will in the actually executed movements of the child and the development of non-willing in the inhibition of frequently repeated movements, furnish the foundation for the formation of character." (The Senses and the Will, p. 195.)

talking in sleep; many involuntary movements, voluntarily."* It is evident, however, that the motions in themselves are neither necessarily voluntary nor necessarily involuntary. The same motion—for instance, an emission of voice—may be in turn, instinctive and unconscious, instinctive but conscious, involuntary in so far as it is instinctive, and finally intentional, truly expressive, and consequently voluntary. Will, when it appears, takes possession of acts that have already been performed automatically. It cannot create new movements, but it imprints a new character on the old ones. It isolates them, or unites them; it hastens them, or it retards them. We do not represent will by a sort of psychological mythology, as an entity hidden behind the muscles, and, so to speak, holding the strings of the marionettes. No, but in the beginning there are certainly muscular excitations, sometimes the blind force of nature, instinct, sometimes intellectual representations, ideas, which are at the same time forces localized, whatever be their origin in the cerebral organs, active ideas, which struggle among themselves until one of them controls and gives place to a distinct, definite motion, working towards an end, and consequently voluntary.

Just as consciousness emerges from unconsciousness, or, better, succeeds it, lighting up phenomena until now obscure and unperceived, so will comes from instinct and automatism, or, to speak more exactly, takes its place among instinctive and automatic acts. Human nature develops as the stem of

* The Senses and the Will, p. 193.

a plant which, herbaceous at first, changes its character and blossoms out in flowers.

All the motions that we have described in other chapters, even the most instinctive, as suction, for instance, become voluntary little by little. On the other hand, the expressive and the imitative motions, although they appear to be voluntary by nature—an expressive sign corresponding to the idea it expresses, an act of imitation presupposing the representation of what is imitated—may be produced in the beginning under an involuntary form.

All observers agree in recognising the fact that in the life of the child there can be nothing that resembles voluntary activity before the fourth month. It is at this age that the first intentional and willed imitations appear;* the child's nurse, for instance, hides behind her hand or turns her head away; the child does the same, accompanying his action by peals of laughter. At the same age, the first really significative expressions show themselves: the gesture to point out an object, the cry to call some one, a motion of the head towards the door to indicate that the hour for the walk has come. At the same age, also, appear the first efforts to attain an end, conscious and, from now on, voluntary—the act of prehension to grasp an object and to hold it. To be sure, it is not necessary that

* "The ordinary childish performances, the first attempts at imitation in the fourth month, and the greater independence in taking food (e. g., taking hold of the bottle), are proofs of the direct participation of the intellect in the occurrence of voluntary movements." (The Senses and the Will, p. 338.)

the child, in order to accomplish a voluntary motion, shall understand the mechanism of this motion—will he know it even when he is a man? It is enough for him to have the idea of an end, more or less clearly defined. And, consequently, in admitting that from the fourth month the child is capable of some volition, we simply recognise the fact that his intelligence is awakened, that it is able henceforth to associate two ideas—the idea of the object that he wants to take, for instance, and the idea of the motion to make in order to grasp it.

Let us guard against exaggeration, and not seek for will where it does not exist. It is thus that Preyer errs, we believe, in considering as voluntary the motions by which the child keeps his head in an upright position.* We know the weakness of the new-born child in this respect, that only at the end of several weeks can he control his swinging head, as it leans sometimes forward, sometimes backward, to the right or to the left.† It is by a little progress each day that the child arrives at equilibrium. But far from seeing in this progress “acts of will to a great extent,” we think that it is explained, above all, by the hardening of the

* The Senses and the Will, p. 264. Preyer relies on the argument that other motions of the head are vigorous, and that consequently the weakness of the muscles has nothing to do with the case.

† According to the observations made on a hundred and fifty children by Demme (cited by Preyer, p. 165), the head is held in equilibrium towards the end of the third month, or during the first half of the fourth, in very strongly developed children, and a little later in children less vigorous; later still, in the fifth or the sixth month, in children a little weakly.

muscles. At any rate, we must admit that as the child's sight develops, and as, in order to see better, he finds it to his advantage to hold his head still, he is led by the needs of sight to hold his head in an upright position; but this position is possible only by virtue of the hardening of the bones and of the muscles. So it seems to us a mistake to consider as voluntary, at least at first, the movements of the eyes; there is here an innate and unconscious adaptation of the eyeballs; and it is only at the end of some time, when he has become really attentive, that the child performs an act of will when he turns his head to the right or to the left, to direct his look towards an object that he wishes to fix and to observe.

There is no doubt but that will is involved in the acquisition of language. The apprenticeship of speech is partly a study, and, like all studies, requires attention and effort. It is the will of the child that removes, little by little, difficulties of articulation at first insurmountable; will, aided by nature, to be sure, and by the progress of the vocal organs. It is will, too, under the form of a sustained attention, that aids the child in perceiving distinctly, in retaining definitely, the words that he hears pronounced. Watch a baby listening to his mother while she speaks, and you will notice, even now, in his physiognomy, in his attitude,* the outward signs of attention which you will find

* One of the most striking signs of attentive effort on the part of the child studying the language, is, that when you speak to him, he watches your lips attentively, as if trying to read your words there.

later in the pupil learning a lesson or studying out a problem. Although in the majority of cases the discovery of the signification of each word springs spontaneously from the intelligence, there certainly are words that the child cannot penetrate, which, so to speak, will not open to him, except at the price of an effort of reflection. To speak is not only to think, it is to will; and, all conditions being equal, in the school of the mother tongue as in all schools, the child will stand first that knows best where to place his attention, and consequently his will.

In his study of the mother tongue, the child gives proof, not only of his good will, but also of his bad will. It is not rare to see children of two or three years of age refuse to repeat the words that are proposed for their imitation; they turn their heads away; they shrink from the effort that is demanded of them, by a feeling of powerlessness, perhaps, and because they really cannot, but also, when it is a question of easy syllables that have been pronounced several times before, by caprice, because they do not wish to say what they are asked to say. There is here an act of inhibition, a veritable conflict of ideas and of desires, which ends in the child's refusal to perform the act that is demanded of him.

It is above all in his practical acts, in the co-ordination of his movements, that the child gives proof of will exercised in attaining an end. His nascent will finds itself, so to speak, in the presence of anarchy; incoherent movements, caused in all the senses, either by instinctive impulses or by

the caprices of the sensibility. It is a question of establishing order in this chaos, and we can see that the child applies himself to this task very early. As has been remarked elsewhere, this very work of organizing movements interests the child as much as, if not more than, the definite result that he is working towards. Dr. Sikorski says that in his opinion this is the signification of the privilege that so early arouses the child's ambition, to hold the spoon himself, to eat alone, without the help of any one. Although he is hungry and impatient to satisfy his appetite, even while knowing that he will attain this result more quickly if he accepts the nourishment at the hands of his nurse, he prefers to eat more slowly, but to serve himself.

The fact has often been noticed that the little child, credulous, docile, in the absence of every solid intellectual principle, and with the meagre consistency of his will, finds himself in a state more or less comparable to that of a person being hypnotized. "All children," says Guyau, "can be hypnotized very easily." * Preyer confirms this by interesting observations. "For example, if I say to my two-and-a-half-year-old child, after he has already eaten something, but is just on the point of biting off a fresh piece from his biscuit—if I say categorically, without giving any reason at all, with a positiveness that will tolerate no contradiction, very loud, yet without frightening him, 'The child has had enough now!' then it comes to pass that

* Guyau, *Education et hérédité*, p. 16.

he at once puts away from his mouth the biscuit, without finishing his bite, and ends his meal altogether. It is easy to bring children even three or four years old to the opinion that a feeling of pain (after a hit) is gone, or that they are not tired or thirsty, provided only that our demands are not extravagant, and are not pressed too often, and that our assertion is a very decided one."* There is some truth in these allegations. However, we do not think that in the examples cited and in analogous cases the child is as convinced as people claim of the states that are suggested to him, nor that he feels himself really rid of the hunger or the suffering merely because of the fact that some one tells him in a tone of authority that he does not feel it any longer. With the mobility of impression and the inconstancy of attention that belong to this age, however, he allows himself to be distracted; his thought turns towards other objects; he forgets what has just been occupying him. Notice, moreover, that it is only in cases in which the sensations felt are not very keen (Preyer acknowledges this himself) that the child accepts these suggestions. He no longer thinks that he suffers, that he needs food, because in truth this suffering is slight, this need not deep. Try the procedures of hypnotism on a child that is really hungry, that is crying because of keen suffering, and nothing succeeds in appeasing his excitation.

The proof that hypnotism has nothing to do with these sudden forgettings, these abrupt modifi-

* Preyer, *The Senses and the Will*, p. 344.

cations of the state of the child's mind, is that of his own accord, without your intervention, he will suddenly interrupt his cries, his complaints, if a bird flies, if a stranger presents himself, in short, if any accident suspends his preoccupation and directs his attention elsewhere. Moreover, it is allowable to suppose that the child, when he gives himself up to your commands, simply obeys your orders; he says what you say, simply because his will gives up to yours, because, being conscious of his weakness, he does not wish to engage in a struggle with a force that he feels to be far superior to his own.

It is none the less true that the will of the little child, excepting in the case of some unpromising natures, some individuals that are obstinate and rebellious from their birth, is usually impressible and easily bent. This, moreover, renders the education of the first years still more delicate than is generally believed. It is the child's volitions that will influence his whole life; it is on the direction given to his budding individuality that his future character in large part depends. On the one hand, will is not, as metaphysical psychologists say, a power one and indivisible, an absolute power. Will admits of degrees, and according as the child has lived in such and such surroundings, according as he has been submitted to one educative influence or to another, he will be more or less in a state to approach the highest voluntary energy of which a human soul is capable. Weak education, which by excessive yielding gives way to all the child's caprices, is not less pernicious than the rigid education that makes it a law to oppress, to break the

will. On the other hand, there are volitions, an ensemble of actions accomplished with reflection, with intention, rather than a single voluntary power; one may be very energetic on one point, very weak on another. It is the pedagogical influences of the first years, the most important of all, that must develop in the child, by liberal supervision as by reasonable compliance, the different movements of the childish will.

II

To say, "How does the child learn to walk?" is to use an expression not really exact. As a matter of fact, everything in walking is not learned, acquired by experience; in this action, as in all others, we must give due credit to instinct. The instinctive character of locomotion is assuredly more marked in the young of animals, as they know how to stand on their legs immediately after they are born. But, although slower in its evolution, less imperative in its impulses, the locomotor instinct does none the less exist in man. We have already had occasion to say that the slowness, the gropings in the development, do not prove at all that instinct does not exist, and these ought to be imputed to the weakness of the organs.

Locomotion is, above all, a question of physical strength, of the solidity of the bones and of muscular vigour. A Swiss observer, Demme, who has studied one hundred and fifty children from this point of view, finds that only very robust children can stand for several minutes at the age of from nine to ten months; children of medium strength

can do it a little later; delicate, weak children towards the twelfth month, or still later. If children stand before the ninth month, it is the result of exceptional vigour.* And what is true of the progress in keeping an upright position is true also in walking.

Still, walking does presuppose a real apprenticeship. There is, so to speak, an art of walking, as there is an art of speaking, and the child acquires it only by a series of preparatory actions, and by slow progress.† Among the preliminaries must be counted the act of standing.

"Os homini sublime dedit cœlumque videre,
Jussit, . . ."

said the poet, and the observers of our time confirm Ovid's assertion in less poetic terms. "If infants could live away from human society, they would certainly adopt the erect posture of their own accord, because it is advantageous for command of the surrounding region through eye and ear."‡ But the new-born child does not raise himself immediately. He tries it when on his nurse's lap, press-

* Cited by Preyer, *The Senses and the Will*, p. 270.

† All agree in recommending that as much as possible be left to Nature in the development of walking. "By hastening the first steps people run the risk of deforming children's legs," says Cadet de Gassicourt (*Revue scientifique*, 1890, i, p. 438). "It would be better to delay walking until the age of fifteen months, and even then to watch the position of the feet and of the body when the first steps are taken. Care should be taken, too, to keep the child from walking too much; he always walks three or four times as far as the grown people that accompany him; he is continually running ahead and returning."

‡ Preyer, *The Senses and the Will*, p. 271.

ing himself against her breast, putting his little arms around her neck. He trains himself afterward by placing his feet on the floor, as he is held up by watchful hands, or resting himself on a chair until he comes to the point of doing without the support, when he is able to control the muscles of his legs, and has acquired enough assurance to need no more help. "It was at the end of the third month," says Preyer, "that Axel first succeeded in his efforts to stand, for only an instant, but without a support. . . . In the sixteenth month the child could stand without being held, he could even stamp on the floor with his foot."

There is no doubt but that in his efforts to keep himself in an upright position, which physiologists say is more difficult than walking, the child is guided by instinct. It does not take much urging to give him the desire to pull his little body together, so to speak, and to raise it. We feel that he aspires to this of his own accord, and the proof is that he seems to be more happy when he tries, and above all when he succeeds in standing, than when he remains nonchalantly lying down or seated. Action is a source of pleasure, when it conforms to Nature. Moreover, imitation, which permeates the whole life of the child, has also its influence. In families where there are several minor children, the younger ones, encouraged by the chattering of the older ones, learn more rapidly to talk; so they will be found to try earlier, and to succeed in standing alone.*

* "If a child grows up among other little children, some of

A great point is certainly scored when the upright position is assured, when the child knows how to stiffen his muscles, to place his feet firmly on the floor, without losing his equilibrium; but he cannot walk or run as yet. It is one thing to stand still in one place, and quite another to put one foot before the other, as the animal does, to move in space. Many months seem to separate the two operations in the case of the child.

Of fifty children observed by Demme, two could walk alone, timidly to be sure, and only a few steps, at nine months; these were able to pass almost without transition from the upright position to locomotion, thanks to a particular superabundance of life and of strength. But none of the others began to walk until about the last of the eighteenth month.

Nothing is more variable than the date of the first step,* even in children whose physical constitution is all that could be desired, and who seem equally well built. It has been claimed that there is an inverse ratio between the precocity of locomotion and that of language, that the child who speaks early walks late, and *vice versa*. This does not seem unlikely, Nature economizing willingly on one side what she spends in excess on the other; being given, also, this reason, still more serious, that loco-

whom are walking, some learning to walk, then he will, as a rule, be able to stand erect and to run, without any support from the mother, earlier than if he grows up alone." (The Senses and the Will, p. 273.)

* It is from the twelfth to the twenty-fourth month, and most often in the last month of the second year, that children usually begin to walk.

motion is above all a physical act, language above all an intellectual act, so that the advancement of the one and the corresponding slowness of the other might be considered even now as an example of the great law governing human life, according to which the moral should suffer when the physical predominates, and *vice versa*. We do not believe, however, that the relation in question has been sufficiently verified by experience for there to be any interest in seeking an explanation of it. What remains certain is that in the mass of new-born children, as in a badly managed race, some racers start much sooner than others. And in finishing the history of the education of walking, we should perhaps convince ourselves that the cause of these differences ought sometimes to be sought elsewhere than in the inequality of physical forces.

The faculty of putting the legs in motion, one after the other, of alternately bending and extending them, in a word, what is called the locomotor rhythm, is in the child, as in the animal, an affair of instinct. The proof of this is that long before he can rest his foot on the floor, the child, lying in his bed, in the bath, or on the carpet, already accomplishes these bendings and these stretchings. What shows this fact still better, is that long before the child can stand, if we put him down and hold him under the arms, and then walk him up and down on the floor, he will of his own accord perform this alternating motion of the lower limbs, which is the necessary condition of walking. "Mark," says Bain, "a child jumping in the arms or lying on its back kicking; observe the action of the two legs

and you will find that the child shoots them out in turn with great vigour and rapidity. Notice also when it first puts its feet to the ground; long before it can balance itself, you may see it alternating the limbs to a full walking sweep. Only by virtue of this instinctive alternation is walking so soon possible to be attained. No other combination equally complex could be acquired at the end of the first year. Both a vigorous, spontaneous impulse to move the lower limbs and a rhythmical or alternating direction given to this impulse are concerned in this very early acquisition.* Preyer is of the same opinion, and he also recognises the fact that there is a pre-established adaptation of the locomotor movements. He cites the following observation: A child was held up and carried forward for the first time at the end of the fifth month, his feet touching the floor; immediately his legs began to move alternately; each step was fully executed, without hesitation, without irregularity. When the child was held too far above the floor, the alternation of the movements was interrupted, but the foot in the air made a new step. The contact of the floor with one foot seemed enough to excite the other to movement.†

Instinct, then, gives the impulse; it indicates the rhythmic motion that ought to be executed; but the muscular forces must second this impulse by rendering the execution possible. No doubt physical strength increases by itself, because of natural

* Senses and Intellect, part i, chap. iv.

† Preyer, the Senses and the Will, p. 274.

growth, but exercise will also contribute to its development. Here we touch on one of the reasons that explain why some children walk earlier, others later; they will walk earlier if appropriate exercise has prepared them to do so. This is why the artificial means that are employed to facilitate walking, to assure it when it is hesitating and staggering, may be a good thing in spite of the drawbacks that they present. After Rousseau, Kant severely condemned walking machines. "Is it not strange," he says, "to wish to teach a child to walk! As if a man could not walk without instruction."* Physical deformities often result from the use of these methods of acceleration: bow legs, hollow chests; surely it is better to trust to Nature, to the exercises that she calls forth. Let us allow the child to roll on the carpet, to drag himself about on the floor, to creep on his knees, to push himself backward or forward with his feet; in these natural gymnastics the mechanism of locomotion will strengthen by itself. "Walking on all-fours," says Preyer, "is the natural preparatory school for normal walking." There will come a moment when the child will raise himself up, and when leaning on chairs, holding to the walls, or even aided by a friendly hand, he will go proudly across the room that he has often covered on all-fours, on the hard floor that has given him more than one bruise.

It is to be noticed that when it has been slowly prepared for by natural exercises, the act of walking alone and without aid comes suddenly and defi-

* Kant, *Pédagogie et l'Éducation physique*.

nately. Like one brought back from the dead responding to the call of a miraculous voice, the child rises and comes forth. No doubt he could walk some time before he decides that he wishes to do so; the mechanism is all ready, but he does not dare to use it yet. He has to conquer a very natural timidity, the apprehensions that this new and difficult action inspires in him, before he can trust himself entirely to travel through space. My elder son, who for some time had been able to take several steps by hanging on his mother's skirts, or by her hand, one fine day, in a shop, when no one was noticing him, quietly escaped; all of a sudden he was seen at the other end of the room, without, so far as we could see, any appreciable cause having started him on this first escapade. The feeling of his strength had come to him, his confidence was sufficiently established. Preyer made an analogous observation: "It was after he was fifteen months old that Axel, standing on his feet, began suddenly, for the first time, to walk around the table, in a hesitating way, to be sure, staggering like a drunken man trying to run, but at the same time without falling."

Whatever rapidity, whatever decision, the child may sometimes put into his first effort at walking independently and freely, still he is far from having conquered all the difficulties. He will be sure to advance at first only with caution, his arms extended before him as if he were showing the way with his hands, in reality because he still has some trouble in keeping his equilibrium. This is seen above all if the child has walked too early; that is

to say, before his organs have been sufficiently developed. Equilibrium soon becomes a matter of habit; but in the beginning some attention and some effort is necessary in order to maintain it. Even we ourselves have trouble in keeping our balance, if we have had to stay in bed a long time.

What we want to establish above all, before finishing this subject, is, that the moral faculties and the will are not strangers to the progress of the child. Walking, it will be said, is an affair of muscles, of suppleness, or of physical strength! Assuredly so, but a question also of character and of moral temperament.* From the way in which the child walks, we can tell whether he will be active, impetuous, or, on the contrary, indolent, slow. The child that has ardent desires will be pushed ahead by his very ardour. He will wish, earlier than others, to get for himself, to examine at short range, the object of his desires. He will perhaps fall oftener than his comrades that do not risk so much and advance with more caution, but he will also pick himself up more quickly, and certainly he will walk earlier. A sudden emotion, a feeling of fear, will sometimes be the cause of hastening the *dénouement*, and will triumph over hesitations; when frightened, the child will cross the room to get away from the danger.

A general fact, showing clearly that the moral nature is interested in the apparently material

* "Without exaggeration," says Marion, "I hold that the education of character is going on at the same time with that of locomotion, that the way in which a child learns to walk is not without moral importance." (Revue scientifique, 1890, i, p. 77.)

action of locomotion, is that idiots are very late in walking. It is not only because their sensibility is obtuse, because they have not the normal desire to approach a desired object, or a person dear to them,* it is also because they are incapable of attention, and without attention the child could not guide his first steps.

Although instinctive in their origin, the special movements that walking presupposes are afterward necessarily attentive, and consequently voluntary. Afterward, under the rules of habit, they will become automatic. Here all the modes of activity are joined: the tendency to put one foot before the other comes from instinct, but the direction given to these movements, the resolution to do without all support, to attain an end, to run to the mother who holds out her arms—all these are acts of will. Moreover, will shows itself again under another form, in inspiring the child with confidence in himself. In order to embark upon his first voyage in his room or in his garden, he needs courage and boldness. If we doubted this, it would be enough to consider the pride that shines in his eyes, the joy that suffuses his triumphant face, the noisy peals of laughter that sometimes accompany his first run from one chair to another, from his father to his mother, for us to be convinced that he is conscious of performing a great feat, and that

* "When the idiot has come to recognise his food, and when he sees it, he fidgets on his chair, utters cries, stretches out his hands, tries to get nearer to it. So showing him his food is a process employed to force him to stand and to move forward." (Dr. Sollier, *op. cit.*, p. 91.)

consequently there is here something more than a series of material phenomena; there is an effort and the happy feeling of success in the effort.

III

When the child has accomplished these two decisive and all-important efforts of his life, from which he emerges capable of speaking and of walking, he has at his disposal the two essential elements, the two principal elements, of his play, which will almost always consist in speech and in movement. To leap, to run, and, on the other hand, to talk with his soldiers, with his doll, later with his playmates, such will be the child's principal amusements. There is no mute play, no motionless play. But does not the child play before he knows how to walk and to talk? He has played long before this, if by play we mean simply to amuse, to divert oneself, to perform actions that have no end but that of pleasure. We shall not expect of the nursing baby the play that presupposes the faculties of a more advanced age—sensibility, imagination, a certain power of combination; but play is not confined exclusively to these categories; the child can play as soon as he can act, in whatever way it may be. The exercise of the senses, the first movements of the legs and of the arms, the first exercise of voice, may become for the little child occasions of diversion and of play. He plays in his cradle, when he can finger the bright flowers on his coverlet or his curtain; in his bath, when he can splash the water with his hands; on a carpet, when he can move his legs and give himself up to unrestrained gymnas-

tics. His cooing, his chattering, is also play in a sense; the child amuses himself with his unintelligible prattling. Noises that are particularly amusing—a bell, the sound of his rattle, a whistle—all these give him pleasure and make him cry out with joy. The child is naturally joyous. Every activity that conforms to Nature, in his early development, is really play to him. Joy, as Froebel says, is the soul of all the child's actions.

It is not necessary to invent playthings,* to put artificial instruments into his hands. In the spontaneity of his instinct for play, the child will very soon find little inventions for himself, will think up exercises that will give him pleasure. See him, from the second year on, making holes in the sand, building walls, digging ditches. See him take a newspaper and spread it out before him, comically pretending to read, moving his lips and making some sort of sounds with them. "I have under my eyes," says Michelet, "a baby hardly eighteen months old, who, from the time that he could place two little pieces of wood one on top of the other, has delightedly clasped his hands, and admired, plainly saying to himself, as did the Creator, 'It is good.' Another, two years and a half old, stronger in this form of architecture, calls his sister to witness his talent, and says, 'Baby did it.'"[†]

The child sees play everywhere. Preyer tells

* We do not wish to question the utility of playthings. There is no doubt but that the intellectual inferiority of children brought up in the country results in part from the fact that they have no playthings such as city children have.

† Michelet, *Nos fils*, p. 70.

how Axel said "We are going to play colours" every time that his father submitted him to his ordinary exercises to find out his aptitude in distinguishing colours. Dr. Sikorski noted the same fact. "The absence of discernment between amusements and serious exercises, or rather between the pure observation of the things that surround him and the activity resulting from creation and from fancy, is one peculiarity of the child's activity."*

A complete psychology of play would require long study. Without going so far as to say, with Froebel, that play is the most perfect means of the child's development, we shall willingly repeat after him that play is not a frivolous thing for the child, but has a deep signification.† It is in play, which is his principal occupation, that he gives free scope to all his aptitudes. It is there that he shows us the most intimate dispositions of his soul. A complete history of the child's play would enable us to grasp, from day to day, the progressive development of all his faculties.

It is under the form of imitation that play, from the second year, is most attractive to the child.‡ Before he can imitate by himself, imitations, reproductions made by others—for instance, little wooden, leaden, or rubber animals—have an especial

* Dr. Sikorski, *Revue philosophique*, August, 1885.

† "Play constitutes the most salient side of the child's life," says Dr. Sikorski, who has studied very minutely this part of the psychology of the child. (*Rev. phil.*, vol. xix, p. 441.)

‡ Livingstone says that the play of the children in the negro tribes of Africa consists usually of shooting and invading games, imitating the principal occupations of their fathers.

fitness for amusing him. In this case, to understand the pleasure felt by the child, it is necessary to consider the fact that pictures, of whatever nature they may be, drawn and painted or roughly carved on cardboard, call up known objects, and excite the activity of the mind by calling forth a series of comparisons. The pleasure would be slight if the child were contented with looking at the animals that come out of his Noah's ark. But it does not end here; he fondles them with secret pride, perhaps, in thinking that he can finally touch in their reduced and harmless forms the dog or the cat, which he loves so to see, but which, as yet, he does not dare to go near. Who can prove to us that these animals do not seem to him to be alive? In any case, he sets his wits to work to make them stand up, to make them walk, to group them in herds; in short, he makes them imitate the different acts of real animal life.

Imitation inspires a great many of the plays of childhood, but in amusements of this kind, as in all others, the activity put forth is the cause of the joy felt. To play with soldiers, or with dolls, to play at keeping house, later to play school, to snap the whip as the postillion does, to water as the gardener does—all these endless plays of the child, which have been found at all times and in all countries, all these diverting imitations of the serious matters of life, amuse because they bring action.*

* In his book on Primitive Civilization, Tylor calls attention to the fact that imitative plays often survive the customs that they have copied; for instance, the bow and arrow, the sling, and so on.

However, there is something more in the purely imitative plays: a touch of vanity, ambition satisfied in aping grown people. On the other hand, all these childish pretendings are really little comedies: they seem such to parents, who are the spectators, but the children themselves, also, in whom the sense of the comical is not altogether lacking, find a new element of pleasure in the very consciousness that there is something droll in their actions.

It is not mere physical activity that causes the joy of play.* The sensibility comes early into the matter, at first under the form of social instinct. A play to which the child only now seemed indifferent, appears to charm and delight him as soon as there is some one to share it. It is not mere play that the child seeks; it is the society of his playmates, the prelude of friendship. By the side of the affectionate feelings, in these little societies of play, grow and develop, moreover, the personal feelings, rivalries, and ambitions. Playing is often, to the child, putting himself forward, asserting his superiority, proving his strength, and, finally, attesting his personality. If he likes boisterous, noisy amusements, the drum, for instance, and the horn—which Kant repudiates as disagreeable, and certainly the majority of parents are of his opinion—it is not exactly because his ear is charmed by all this noise; it is because the noise that he makes calls attention to himself, makes people notice him.

* Dr. Sikorski goes so far as to claim, not without exaggeration, that "movement and gymnastics play a secondary and subordinate part in the child's play, and serve only as instruments with which to realize intellectual conceptions."

Other feelings are excited by playing with the doll. A certain motherly affection shows itself in the little girl who, as the poet says,

"Dreams of the name of mother as she rocks the baby doll."

"What is a doll, if you please?" wrote Hippolyte Rigault. "It is neither a thing nor an object, but a person; it is the child of the child. By imagination he lends it life, movement, action, responsibility. He governs it as he is governed by his parents; he punishes it or rewards it according as the doll has been good or bad; he imposes upon it the same discipline that he himself receives."* There is here, not as some surly minds contend, a ridiculous parody; there is a charming rendition of the drama of motherhood, something quite different from the pleasure of playing with toys, little dresses, little hats, and bedizening the doll with them. The proof of this is the fact that the simplest doll—a two-cent doll—will amuse the child as much as a doll that is a masterpiece of art and of luxury.

So when the child about three years old plays with his leaden soldiers, he does not enjoy them simply because he can arrange them, draw them up, make them go to battle, admire their beautiful colours; perhaps when he pits the French against the Germans, and pretends that there are combats between them, a slight feeling of patriotism is already aroused in his little heart.†

* H. Rigault, *Conversations littéraires et morales*, new edition, 1882, p. 5.

† It is hard to see how a distinguished mind like Rigault could be so far misled as to criticise, as he has done in his charming ar-

What there can be no doubt about is, that in these plays, as indeed in all the others, imagination is constantly at work, and the most amusing are those in which there is most to invent. The more elaborate playthings have just this fault, that by their very perfection they hinder or render useless the work of childish imagination. The child is never happier than when he is planning his own games, when he is creating the material for them, when he makes a stick into a horse, a chair into a cart. "To create, to reproduce," exclaimed Michellet, "what happiness for the child!" And just as we have seen affectionate feelings, social feelings, and perhaps patriotic feelings, insinuating themselves into play, so the feeling of beauty, of regular and symmetrical form, of the harmony of colours, sometimes creeps in. In any case, the child's imagination, considered as an æsthetic faculty, could be cultivated to advantage by a considerate education, which would show judgment and good taste in the choice of playthings. "People believe that they have done everything," said Rigault, "when they have invented playthings that amuse children without hurting them. This is not enough. Even babies are farther advanced than these people think. They have mind before they can speak; their eyes perceive the different forms of objects, even when they

ticle on the Playthings of Children (written in 1858), what he called the "military monomania of children." One cannot read without bitterness, since 1870, the passages in which he vented his spite against these plays, which "make a corporal of the child," and in which he said ironically: "Prussia is decidedly the first military power for the leaden soldiers!"

wander about without seeming capable of fixing themselves on any object; their ears are already sensitive to differences of sound, even when they do not seem to recognise the mother-voice.* What is the first plaything that people put into their hands? A rattle. I have seen charming ivory ones, silver ones, gilt ones, carved with exquisite art, but I declare that the most beautiful rattle is revolting to me. I do not complain, with Addison, that in giving the child the habit of moving and of shaking, the rattle develops the faculties of motion at the expense of the faculties of thought. Man is born to act, and there is no harm in early accustoming him to action. But why do they nearly always make this metal man, the child's first friend, a deformed being, hunchbacked before and behind, with a mouth that gapes, a nose that bends over and joins the chin? The first imitation of Nature that strikes the child's eyes is a monster. He makes the acquaintance of art through the medium of the ugly."†

Other intellectual faculties are associated with imagination in directing the child's play. There is no doubt but that some instinct of investigation and research, a tendency to experiment, presides over certain of the child's plays.‡ It is this desire to know that the baby obeys when he rips open his

* Rigault forces things somewhat.

† H. Rigault, *op. cit.*, p. 2.

‡ It is not necessary, however, to exaggerate and to say, for instance, with Dr. Sikorski, that when the child is put into the bath with his toys, and amuses himself by plunging the floating bodies into the water, and, on the contrary, by making heavy bodies swim, he is "studying the hydrostatic properties of his toys."

dolls, or takes his carriage apart to find out how it is made. But let us guard against seeing intellectual aspiration where there is only a muscular agitation. It would not be necessary to explain, as Kant did, for instance, that children love so to play blind-man's-buff because they have a desire to know how they could help themselves if they were deprived of one of their senses. Things are simpler than that; play is above all a need of expansion, of motion—in a word, of action. It is true that to understand is even now an act, and that is why instructive games, which, however, must not be abused, have very early a certain charm for the child.

The ideal of play would be a diversion that would associate at once the different activities of human nature, that would at least exercise a physical and a moral faculty at the same time. Indeed, there is always something intellectual even in the exercises that seem purely physical. Sometimes the physical factor is reduced to a minimum, as in the play that consists in placing blocks of wood one on top of the other, in making little constructions of one sort or another. In these there is hardly any motion, the ruling activity being the geometric thought, the seeking for well-ordered forms, at least the will to make by himself a work of some sort. So in the absorbing recreation that consists in throwing stones into the water or in blowing soap-bubbles. At other times, on the contrary, it is the physical activity that outstrips all the other elements of play, for instance, when the child plays ball or rolls a hoop.

Not only has the child the instinct of construc-

tion in his play, but he shows also a mania for destruction. Goethe gives an amusing example of this in his Memoirs. "There was a pottery mart near by, and not only had they furnished the kitchen with this ware, but they had bought miniature utensils as playthings for us. One beautiful afternoon, when all was quiet in the house, I was amusing myself on the balcony with my plates and my pots. As I did not know what pleasure further I could derive from them, I threw one of these playthings into the street, and found it very amusing to see it break into such queer pieces. The Ochsensteins, who saw how this amused me, for I clapped my hands in my joy, cried out, 'More! more!' I did not hesitate, and quickly went another pot. And as they did not cease crying 'More!' all the little plates, the little stoves, the little pots, were thrown one after the other on to the pavement. My neighbours continued to show their approbation, and I was delighted to give them pleasure. But my provisions were exhausted, and still they cried 'More!' I then ran straight to the kitchen, and I took the earthen plates, which naturally offered more amusement in breaking; I came and I went, I brought the plates, one after the other, as I could reach them on the shelf, and as these gentlemen seemed never to be satisfied, I threw into the same ruins all the breakable objects that I could drag thither. Some one came finally, but it was then too late to stop me."

In this fury of destruction, in which Goethe as a child showed as much spirit as he later put into his dramas, it is physical joy that predominates. But

a part also must be assigned to the pleasure of making something delightful to others, of astonishing, of exciting laughter. The child very early has the sense of a joke. To see him watering without water in the watering-pot, drinking from an empty cup, one might be inclined to believe that he is naïvely deceiving himself. But do not believe this. It is plain to be seen that there is here for him only a play of imagination, that he is amusing himself by a pure comedy.

Play being the all-important business of childish life, and all play consisting more or less in acts, it is in play then, above all, that we must seek for the beginnings of voluntary activity. Its intervention has probably been recognised more than once in the different pictures that we have traced. Even in purely physical play, it is will that enables the child to co-ordinate his movements, to make them appropriate to the actions that he performs. But it is above all in the play where intelligence has a part—which is often real research, as in the little solutions of problems which the child asks himself, and which he solves—that the directing power of the will is revealed, guided, it is true, and upheld by charm and by pleasure. We cannot repeat too often that play is a serious thing to the child; not only a pastime and a distraction, but an intellectual work, and consequently a school of thought and of will. Play is the child's study, in the strict sense of the word. "Play," says Guyau, "is the first work of little children. It permits us to judge of their character, to develop it in the direction of perseverance and of active energy." The difference

in natures shows itself here, some having remarkable ardour, energy, and will; others letting us see, even now, the weakness of their characters, their apathy, and, in a word, their idleness, which qualities do not wait until the entrance into school and the first lessons in reading before showing themselves.

CHAPTER V

DEVELOPMENT OF THE MORAL SENSE

- I. Evolution of moral ideas.—Influence of surroundings and of education on the development of the moral consciousness.—Circumstances of education most often explain gaps in the moral sense. II. Affectionate feelings the starting-point of moral evolution.—Fear of parents.—Paternal or maternal will the first rule of morality.—The child's instinctive tendency to bend before the law.—We find nothing in the little child resembling real morality.—His acts show only that he fears punishment. III. Affection follows egoism.—Sympathy a principle of moral direction in the child.—The provisional phases of nascent morality in the child may remain all his life definitive states of morality. IV. The organization of the moral sense presupposes a multitude of progressive steps.—The child at first conceives of morality only as a personal rule that applies only to himself.—He confounds rules of action with the will of his parents.—A series of experiences is necessary to form the abstract idea of good and evil.—The performance of good actions prepares for the development of the idea of the good.—The morality of interest, the morality of feeling, show themselves in the child's actions.—Appreciation of the consequences of actions, whether good or bad. V. The idea of moral law.—Education of conscience.—A defect of education results in a defect in the moral sense.

I

THE history of the evolution of moral ideas in the child's consciousness is most complicated and

most delicate. Psychologists who study only the adult consciousness, who consider only the higher forms of morality, who, in a word, begin with the end, have a comparatively easy task. They distinguish two or three ideas, very distinct, very clear: goodness, duty, responsibility; they describe the feelings that accompany these ideas, and that done, all is said. Everything seems simple in the consciousness of a Socrates, of a Franklin, or of any reflective man, just as all is bright and clear on the highest ridge of mountains, although it has been necessary, in scaling them, to go through the darkness of fogs and of clouds, to pass over winding paths, and to climb steep ascents.

But if the moral consciousness stands out in characters clear and distinct, in the light of a reason ripened by age and by experience, what difficulties do we not encounter during the period of growth and of formation, the slow moral evolution, the obscure emotional and intellectual work from which, little by little, the real moral sense will emerge?

However disposed we may be to grant much to what is innate or hereditary, for the moral faculties as for all the others, perhaps nowhere better than here does the influence of education and of social surroundings show itself. The moral consciousness is not a pure gift of nature, a natural force organized in a trice, as the strict naturalists or the philosophers of the school of evolution claim. Herbert Spencer, for instance, admits "veritable moral intuitions"; he speaks of emotions that correspond immediately to good or to bad conduct, which

would be the result of nervous modifications, themselves produced by the experiences of our ancestors, and slowly consolidated through all the past generations of the human race. To this Renouvier rightly answers: "We know from the observation of childhood, by experience of the effects of education, that heredity furnishes to the nascent man no fixed determination of good and bad acts."* The moral consciousness is in great part an acquired faculty, which is formed little by little, which develops only under certain conditions, undergoing many metamorphoses, at the price of a laborious birth, and which in its beginnings does not in the least resemble what it will be in its final state. Moreover, it is not an exclusively personal acquisition, in which the spontaneity of the individual, limited to his own forces, can be sufficient unto itself; more than any other of our faculties, it needs the concurrence of outward influences; it presupposes action, the fruitful stimulation of the human medium; it is communicated to us, suggested by our parents and by our teachers. The moral sense, in a word, is not merely the individual contribution of every intelligence entering the world; it is still more the product of civilization and of education, a consequence of social life, a sort of favour that comes to us from without.

"The development of the intellect," says Preyer, "depends in so great measure upon the modification of innate endowments through natural environment and education, and the methods of educa-

* Critique philosophique, 1875, ii, p. 324.

tion are so manifold, that it is impossible to make a complete exposition of a normal intellectual development."* Though perhaps questionable in what concerns the intellect, Preyer's reflection is exact if applied to the moral sense, the regular elaboration of which a multitude of causes may modify and trouble. So many preliminary operations are equally necessary in forming the conscience, the moral sense is composed of elements so diverse, it depends on a framework so laboriously constructed, it is so delicate an adjustment of pieces borrowed successively from the different parts of our mental organism, that the world of real children, subject to the caprice of so many different educations, seldom furnishes an example of the evolution of the moral sense that is complete and satisfying in every way.

This is why the world of men, in its turn, shows us so many moral natures that stumble and are not to be depended upon, or are imperfect in some way. Either the conscience is fragile, subject to weaknesses, because the many conditions that ought to assure its development have not marked their successive imprints strongly enough on the child's soul, or one of the essential elements is lacking, because in the progressive series of feelings and of ideas from which the moral being is evolved, a step has been omitted or passed over too quickly. One man, for instance, will have a proud feeling of justice; iniquity will draw from him cries of sincere indignation; but he will have no notion of the govern-

* Development of the Intellect, p. 1.

ment to be applied to his own passions. Another will be an irreproachable follower of the law, but he will never know warmth of affection, or devotion to others. If we looked carefully, we should always find in the child's life, in the particular circumstances of his education—the mother absent or lacking in tenderness, the father without authority, isolation from or neglect of all social relations, etc.—the reason for these moral insufficiencies and gaps.

There is, then, great interest in following step by step the child's little desires, which may give birth to the moral will, if it were only for the purpose of showing how education, and above all personal effort, can in adolescence and in maturity repair the mistakes committed in childhood. How, in this whirl of capricious desires, of disordered, changeable impulses, which characterize the first years, do we see obedience to law appearing, entirely outward law at first, which is confounded with the people who command, who give orders to the child! How shall we see the disinterested pleasure of being good merely for the sake of being good, substituted little by little for the egoism that suggests merely obedience? By what secret process does law, vested at first only in parents, become the notion or the feeling of an inner obligation, the abstract idea of duty and of law? This is what we ought to learn by observing the child from the cradle.

II

It is in the different emotional states that we must look for the starting-point of the moral evolution. Of all that developed reason can comprehend of virtue and of striving after the right, of all that the conscience of a Kant, for instance, contains of moral beauty, the first beginning is this simple fact, that, being naturally sensitive to fear and to pain, the little child represses his tears and his cries before the threatening manifestations of his parents' will. "A man incapable, by hypothesis, of feeling pleasure or pain," says Ribot, "would be incapable of attention." He would be still more incapable of exercising the moral sense.

The first form of moral consciousness, then, is the fear of paternal or maternal authority. Almost everybody agrees in recognising this. The right, in the first conception of the very little child, is simply what is ordered or permitted; the wrong, what is forbidden. Preyer, who, moreover, has devoted only a few lines to the question that occupies us now, finds that in the middle of the second year the consciousness of good and evil—that is to say, of what is forbidden—has already been acquired for some time.* So Sully says that the child's repugnance for doing wrong is simply the egotistic feeling that causes him to dislike or to fear punishment.† To be very exact, we should say that wrong for the child is less the prohibition made by parents

* Development of the Intellect, p. 13.

† Sully, *op. cit.*, p. 560.

than the disagreeable consequences to which he exposes himself if he disobeys.

So, at the age when the child is not yet capable of understanding the meaning of an order or of a prohibition, the education of the moral sense has already begun, simply because the people that surround him have set in opposition to his caprices the mute and inflexible resistance of their will. We have seen a mother induce her baby not to waken her again during the night, and not even awaken himself to be nursed, simply by not yielding to his demands and so showing him the uselessness of his cries. The operation was a painful one, and called for some patience; it was the father who really carried it through, by taking the child for several nights in succession into his own room. It is in this sense only, and for a very short time, that we can accept and apply the maxim that Rousseau wrongly wished to extend beyond the first months, which consists in making the child's blind desires bend before necessity. As soon as possible, the will that orders, as later the will that advises, should be substituted for the necessity involved; people can never begin too early to talk to the child of his duty.

But we have not gone so far as that yet. The first lessons in morality are given by the imperative will of parents. Moreover, it is not necessary that this will, in order to be obeyed, should arm itself with a long train of punishments, of which there can be no question in the case of a child only just born; it is enough for the will to show itself. Where is the father who has not found that merely

by raising his voice, by looking grave or severe, he can often, if not always, overcome the little unruliness of the young child, provided, however, that he begins this at the outset, at the very first appearance of the acts that he wishes to repress?

The child has a stock of natural docility which, so to speak, forestalls the rules laid down for him, a sort of instinctive fear which it is necessary to treat with discretion, moreover, if one wishes to avoid the risk of developing a servile character. The demands of moral education would not be heard as they are if they did not meet in the child's nature an unconscious and dormant instinct which has only to be lighted up and awakened. This instinct is not exclusively the feeling of weakness in the presence of force; it is a special disposition that nature transmits to the child, strengthened, if not created, by moral habits, by the virtuous efforts of our ancestors. "The civilized child," wrote Guyau, "instead of being, like the savage, without law, without restraint, is all ready to receive the yoke of the law. Education finds in him a sort of pre-established legality, a natural loyalty."* Such is the opinion of Sully and also of Egger. "The child shows very early a disposition to submit to the authority of another, and this moral instinct is probably only the hereditary result of the social experience and of the moral culture of several generations." (Sully.) "There is no doubt but that, in a civilized society like ours, education greatly aids the reason of childhood, but it is still more

* Guyau, *Education et hérédité*, p. 79.

evident that the child has a natural tendency to follow the lessons given him on this point." (Egger.)

Whether by ever-present instinct or hereditary acquisition, it is an incontrovertible fact, in any case, that the child willingly bends before the law that his imagination vests at first in the will of his parents. So true is this, that the child soon comes to wish to apply the law, not only to himself, but to others. At twenty-three months, Tiedemann's son came into a part of the house where he had been punished the week before for having soiled the floor; without any other provocation, he immediately said that whoever should soil that room would be whipped. The child very soon generalizes; little by little the idea of law becomes distinct in his mind from the consideration of the people who represent it in his eyes. Even in the absence of his father and his mother he will accustom himself to conform to it; witness the child observed by Preyer, who at thirty-two months could not see his nurse disregard the prohibitions that had been made for him, and would never consent to see her eat with her knife, without protesting vigorously.*

However important these first dispositions of the child may be for the future acquisition of moral distinctions, it is impossible to see in them anything really resembling the moral sense. It all amounts to an impulse towards obedience, or to the association that is established in the child's mind between certain acts and the disagreeable results of these acts. The principle of association is so

* Development of the Intellect, p. 20.

strong, moreover, that the child who begins by fearing and disliking punishments, the expected and foreseen consequences of his faults, ends by detesting the faults themselves.

It would then be an abuse of words to attribute the moral sense, as Preyer does, for instance, to the very young child. Perez seems to reproach himself for granting too much, for making the measure too short, in fixing the first awakening of the moral sense at six or seven months. "The entirely objective notion of good and bad, the intellectual germ of the moral sense, cannot assert itself," he says, "before the age of six or seven months."* Darwin, too, though disposed to exaggerate in the case of children as in that of animals, declares that he did not see the moral sense in his son until towards the age of thirteen months. But we do not insist on a few months more or less, for we are convinced that neither at two years nor at three, nor even much later, is the child really in a state to distinguish between right and wrong. In order to believe him capable of morality, it would be necessary to accept at the same time a definition that would weaken and restrict our idea of morality, and an illusory interpretation of certain acts of childish life. What, indeed, are the examples reported by Darwin or by Perez? When Doddy was two years seven months and a half old, his father met him coming out of the dining-room. "I noticed," says Darwin, "that his eyes were brighter than usual, and there was something affected and strange in

* Perez, *op. cit.*, p. 335.

his whole attitude. I went into the dining-room to see what was the matter, and saw that the little rogue had been taking powdered sugar, something that he had been forbidden to do. As he had never received the slightest punishment, his manner certainly could not have been the result of fear, and I believe that it must be attributed to the struggle between the pleasure of eating the sugar and the beginning of remorse." I notice that in order to justify his conclusion, Darwin takes care to observe that Doddy had never been punished; but Doddy was not ignorant of the fact that he had been forbidden to eat sugar, and he had doubtless found that to every command violated by him, corresponded at least his father's displeasure, and the lack of his usual caresses. So Doddy, surprised in the very act of his offence, was disturbed simply because he feared to fall into disgrace.* Perhaps, also, he foresaw that it would not be possible to get another chance to satisfy his gluttony. Thus Tiedemann's son, seventeen months old, hid himself

* It would be enough to convince us that the child in a case of this sort gives absolutely no proof of a moral sense, to recall an anecdote entirely analogous, but borrowed from animal life. Romanes, in his book on Animal Intelligence, tells of the conduct of a dog that had never stolen but once in his life. One day when he was very hungry he took a chop from the table and retired with it under a sofa. His master appearing to pay no attention to him, the culprit stayed under the sofa for several minutes, divided between the desire to satisfy his hunger and the feeling of duty; but the latter triumphed in the end, and the dog dropped the stolen chop at his master's feet. What gives an especial value to this example, adds the author, is the fact that the dog in question had never been whipped.

to eat sugar, not, assuredly, from a feeling of shame, but in order not to be disturbed.

The facts cited by Perez are of the same kind. A child of eleven months obeyed when his father raised his voice and said severely, "Be still!" He did not want to walk alone yet, but they made him take several steps by showing him a dainty. A strong prejudice in favour of that view is necessary before one will permit himself to apply the adjective *moral* to actions in which there is shown only the desire of a material satisfaction, or perhaps the fear of pain, associated by the memory with such and such act; at the very least, a distinction between paternal caresses and threats. The association of ideas and memory, added to an egoistic sensibility, conscious of pleasure and of pain—this does much towards explaining the relative obedience that one gets from a child naturally timid, and we refuse absolutely to believe that a baby is in possession of a moral sense as soon as he obeys from habit or from fear.

III

It is not, we hasten to say, egoism alone that appears in the preliminary period of the evolution of the moral sense. Another element—affection—soon insinuates itself as a new stitch in the still loosely woven web of the child's emotions. Soon after the first smile has lighted up his face, the child is capable of loving those who take care of him. And in this second step of the moral development, the good, so far as it is vaguely conceived, is for the child what is agreeable to the people

that he loves; the bad is what disappoints them and gives them pain. Being already anxious to avoid a fault because it will bring its punishment, or to obey a given order because a reward attends it, the little being that is advancing towards morality feels himself fortified in his resolutions by the instinctive sympathy that attaches him to his father and his mother, by the confidence and the faith that they inspire in him. By virtue of the laws of association, as before, if the child begins by hating or by desiring the disappointment or the joy that his good or his bad actions cause for those he loves, he comes from this to hate or to like these actions in themselves, for themselves.

Facts, authentic observations, abound to prove this rôle of sympathy, of nascent affection. Little Betty, aged three, observed by L. Ferri, said to her mother, who praised her for her good conduct, "Mamma, I should like to make you still more pleased; I should like to be good always."* To this child, being good was pleasing her mother. "The desire to satisfy me," said Mme. Guizot, in speaking of little Sophia, "was strong enough in her at seven years to make her alive to her slightest faults."† "I have watched a little child," said Mme. Necker de Saussure, "who, having seen an expression of dissatisfaction in her mother's eyes, without being threatened or even scolded, gave up her play, and, with a heart full of sobs, went to

* L. Ferri, *Observations on a Child*, in *Filosofia delle scuole italiane*, October-December, 1881.

† Mme. Guizot, *Lettres de famille sur l'éducation*, edition of 1888, Didier, vol. i, p. 90.

hide in a dark corner, her face to the wall."* A mother will succeed in curing her children of idleness, of heedlessness, simply by threatening to make them work away from her, under the supervision of some one of whom they are not so fond. The sadness of a father will often suffice to make little culprits wish to repair their faults. And if affection begins by provoking simply the aversion for what is forbidden by parents, it very soon becomes active; it suggests to the child all sorts of efforts to satisfy parents and lead to their favour, so that the father and the mother may never have to complain of him, to suffer because of him.

The facts that we have cited belong to a somewhat more advanced period in the child's life, but it is not impossible to find, as early as the second year, analogous manifestations of the affectionate sensibility. "It was at the age of about thirteen months," says Darwin, "that I found in my child the awakening of the moral sense. I said to him one day, 'Doddy will not give a kiss to his poor papa! Doddy naughty!' These words doubtless made him ill at ease, and when I had sat down again, he put out his lips to indicate that he wanted to kiss me; then he moved his hand as though he were sorry, until I went to receive his kiss." Doddy's supposed moral sense was assuredly nothing more than a feeling of tenderness, the need so noticeable in some children, of wheedling their parents and of responding to their caresses. It is

* Mme. Necker de Saussure, *l'Éducation progressive*, vol. iii, chap. ii.

the same in the case that Tiedemann reports concerning his son in the fifteenth month. "He wept because the hand that he loved to give as a sign of affection was repulsed." Tiedemann interprets this little act in this way, and even considers it as a precocious revelation of the feeling of honour; it is more exact to see in it nothing but an act of affection.

Very early, then, we can recognise the child's tendency to sympathize with the people that are familiar to him. I have noted in my journal of education that, from the first months, one of my children yielded to the influence of a soft, caressing tone, and also that when he awakened in the night, ready to make trouble if left too long alone, he was quieted if I approached him, if I made him feel the touch of my hand by taking his, or by resting my fingers lightly on his forehead. The child appreciates the presence of a protector, of a friend, earlier than people think; he rejoices in it, and this is the obscure beginning of the affection with which he will soon respond to the affection shown him.

Moreover, we cannot ignore the fact that in the soul of the child, as in that of the adult, the most unlike elements are mingled and confused to form emotions apparently simple, but really complex. All children love their mother's caresses, but they do not seek them for a single motive; they desire them at first as egoists, because they bring pleasure to themselves, and because, in order to be happy, they need to live in an atmosphere of peace and of tenderness; but they solicit them also from a disin-

terested impulse, because they vaguely understand that caresses are not less agreeable to those who give them than to those who receive them, and they see in them the proof that they themselves have given their parents nothing to complain of.

"Not all the delicacy of the moral sense is the product of education and the privilege of a more advanced age," says Egger, and to prove this he calls up those little family scenes that we have all known in which the child of four or five years, when scolded and reprimanded, suddenly redoubles his gentleness and his amiability, "as if to make us forget the sorrow that he has caused by his waywardness. . . . Never," adds Egger, "is the child gayer than after these little storms." It is because the child wants to return to favour, and being deprived for an instant of the moral well-being that his habitual accord with the will of his parents brings him, he hastens to restore himself to this moral accord so as to be admitted anew to a part in his beloved caresses.

It would be an exaggeration to speak in such a case of "remorse," and of the "instinct of reparation." We cannot say too emphatically that it is chimerical to try to find in the child the signs of a real moral sense. People must not be deceived by apparent analogies existing between distinctly defined states of the developed conscience and the vague and indistinct equivalents, which are only shadows in the nascent conscience.

However this may be, the child has taken a long step forward when, being still *non-rational*, but already provided with an emotional nature, he raises

himself from his instinctive egoism to disinterested feelings. As soon as there is an exchange of sympathy and affection between child and parent, between pupil and teacher, we may say that the cause of morality is gained; and during childhood, at least, affection will remain the great means of moral education. A writer of talent, whose romances often have all the exactness of things seen and lived, Fr  d  rika Bremer, makes one of her heroines say: "It sometimes occurs to me, when I do not know what else to do, to grasp the culprit child in my arms; to weep with him, with all my heart, or when he is good to embrace him joyfully; usually these means are not without their effect."*

Moreover, how many people there are who remain children on this point all their lives! It is to be noticed that in their insufficient and incomplete morality many people never go beyond one or another of the transitory stages that we are describing; what ought to be only a provisional phase becomes the final form of their imperfect moral sense. It is thus that fear of punishment and the selfish respect for outward law sum up the moral code of a large part of humanity. On a higher plane, the desire to be agreeable or useful to others, the wish to do them good, a larger generalization of the instinct that impels the child to satisfy his parents, remains the sole principle of virtue for certain delicate and sensitive natures. "If I only do good to some one I am happy," wrote

* Fr  d  rika Bremer, *Le Foyer domestique*.

Legouv  recently. "If I do wrong to any one I feel remorse and suffering. I need no other rule of life."*

IV

Egoistic morality, the result of fear and of natural docility, and the morality of sympathy, these are the first two principles of the child's distinction between right and wrong. And these two act together, the one depending on the other, even before the child knows how to talk, before the words right and wrong, good and bad, can be effectively murmured in his ear, or his lips repeat them with any meaning whatever attached to them.

One of the difficulties of infant psychology, as we must not forget, is that in describing the little, vague, half-conscious acts that are observed, we are necessarily obliged to depend on words of precise meaning, and hence to translate these facts inaccurately, to exaggerate them, in lending them a consistency which in reality they do not have. It goes without saying that the language we use can express only with some inexactness phenomena as yet hardly sketched, conceptions more like dreams than like consciousness, which in the child's soul do not take a form definite enough, or precise enough, to come out in verbal expressions. To confine to categories the floating, uncertain, inconsistent movements of the childish sensibility is like trying to weigh a passing breeze, to grasp in the hand the vanishing smoke. The beginning, the

* Legouv , *Fleurs d'hiver, Fruits d'hiver*, 1890, p. 44.

organization of the moral sense, presupposes a multitude of imperceptible advances, of little hidden shades, light vapours that are condensed only little by little; a whole series of dark, mysterious motives, which reveal themselves outwardly only by sudden flashes.

At the moment to which we have come, the child's morality is entirely personal; I mean that the child conceives only by relation to himself, the little that he has caught sight of in the moral world. It is of himself alone that he is capable of saying, when he can speak, "Baby is a good boy!" or, according to the case, "Baby is bad." Having no idea, no experience of society, he does not yet imagine that others can be governed as he himself is, by fear and by affection, and that under the sway of these feelings they obey active impulses towards the right, first images of future obligation and of individual responsibility.

On the other hand, in his naïve conception of law, first sketch of the idea of a moral law, he considers only the real and living will of his parents. He identifies the law with their persons to the very letter, or at least with one of them, the most feared or the most loved, the one whose authority is better established, or whose tenderness is more appreciated. It is not only figuratively that we can say of the child obeying his father or his mother, "The father or the mother is his conscience." In his imagination, the law is not distinguished from the person that represents and applies it. Moreover, this sincere and complete illusion will not surprise any one who reflects that by an analogous confusion, even

for many intelligences arrived at the maturity of their reason, the good is God, the divine being Himself, the heavenly Father. The morality of pious souls is often only obedience to and faith in a supreme being, conceived as omnipotent, who commands and forbids, rewards and punishes, who is an object both of fear and of love.

It is going a little too far, then, to say, as does Mme. Necker de Saussure, in the beginning of the chapter entitled *Conscience Before the Age of Four*: "At three years the child has a lively idea of right and of wrong, although he does not express it in general terms. He recognises a law binding to all, a tacit convention that must be respected." And she adds that for this it is necessary only that his attention shall be drawn to it. This amounts to saying that if the child could return into himself, could be cool-headed, could rule the bad feelings that draw him away, he would then hear in his heart the voice of conscience, and be able to proclaim himself well acquainted with good and evil.

No, it is not by inspiration, by inner illumination, so to speak, that moral distinctions advance, as is wrongly imagined by the philosophers that exaggerate the part of innate tendency, or at least fail to recognise how necessary is the excitation from without in developing inner dispositions. In order that the first faint lights may be made bright, that the original impulses may unite and strengthen, that the general idea of right and wrong may be separated by successive abstractions from the concrete and entirely personal representations, it is necessary that the child should pass through a

series of experiences, and that being urged on by circumstances, his reflection should extend and his sensibility grow.*

Notice this first of all: if, when once formed, the moral consciousness becomes the higher principle of virtuous actions, one of the sources of practical morality, virtuous actions, in their turn, may be considered as one of the origins of the moral consciousness. I mean that by the habitual, or even the accidental, practice of right, the moral sense develops and purifies itself. Between moral beliefs and the performance of duty there is the same relation that exists in general between faith and practice. Have the faith, and you will act; but it is none the less true to say, act, and by the effect of your action you will see the faith that you already had increasing, and even what you did not have, appearing. Even as grown men, we have not really a clear intuition of moral ideas, except when circumstances have compelled us to perform some of the great duties of life—the duties of paternity, for instance, or those of patriotism. In the modest sphere of his

* It is evident that the good is at first only a relative notion in the conscience; good things, in the child's eyes, are good things relatively to his own interests, to his needs, to his affections. The good is only the supreme abstraction, which will slowly become clear in the developed conscience. How people deceive themselves on this point! They say, for instance, with Mr. F. Hémet (*Entretiens sur la liberté de conscience*, p. 18): "With the awakening of conscience we distinguish our good and our bad actions; the first seem to us to merit praise, and so on." This is reversing the order of things. The praise, on the contrary, is the point of departure; little by little the child becomes accustomed to consider as good actions those that are praised by his parents.

actions, then, how much more does the child need the frequent stimulus of obligation to do right, in order that the idea of the good, of the right may be clearly fixed in his intelligence! In making him obey rules, not only do you obtain an immediate gain in outward discipline, but you institute, without suspecting it, a series of experiences of the same nature, the echo of which fixes in the child's brain, little by little, the notion of what he ought to do if he wishes to merit your affection and your praise.

This notion is as a fixed point, around which the emotions and the later affections will group themselves to strengthen it and to determine it, little by little. At first there will be the pleasure that the child will find in feeling himself in accord with the will of his parents; afterward there will be his self-esteem, the desire to be appreciated and praised. And if he comes spontaneously to perform an act of generosity, of liberality that was not demanded of him, but of which he reads the approbation in the eyes of his parents, the satisfaction of his little conscience will exalt him and will arouse his desire to do right. Look at Doddy, Darwin's son, who, when hardly two years and three months old, gave his last piece of spiced cake to his little sister; with what an air of triumph he cried: "Oh, Doddy good, Doddy good!"

The motive of interest, the motive of sentiment, has already begun to exist in the obedience of the child that tries, from fear or from affection, to regulate his conduct. But in order that the notion of utility should be clearly formed, that the affec-

tionate feeling should acquire more strength, it is indispensable that the child, having become more reflective towards the age of three or four years, should render to himself better account of the consequences of his actions, and of the actions of others; it is indispensable, moreover, that social relations, especially daily intercourse with other children of the same age, should give sympathy greater occasion for exercising itself. Of course we do not claim that in the case of an isolated child, one who has neither brother nor sister, who has no playmates, the acquisition of the moral sense would be an impossible thing; but it would certainly be slower and more laborious.

Social life, under its childish forms, is certainly a school of morality. In playing freely with his companions of the same age with himself, the child learns their good qualities and their faults, and experiences by himself the effects of their kindness or of their naughtiness. A great advance will have been made when he will say, not merely speaking of himself, "Baby bad!" but, speaking of his brother or of his sister, "Paul bad!" "Martha bad!" and that, not because Paul and Martha have disobeyed their parents, as he disobeyed them, too, but because Paul has given him a blow that hurt him, because Martha has taken a cake or a plaything away from him, the loss of which he feels acutely. The profit will be the same, in the opposite case, if he has to do with gentle and generous comrades, who do little favours for him, who complacently divide with him all that they possess. It is not only a disposition to gratitude or to an-

ger, according to the case, that will be implanted in the consciousness; it will be also, provided these experiences are frequently repeated, a tendency to understand the relation of dependence, which connects the actions of others with his own happiness, and consequently to appreciate by their effects, though only in a utilitarian sense, the unkindness or the kindness of others.

These vague conceptions will become more distinct when having been a victim to the bad conduct of Paul, who returns blow for blow, or having received consideration from Martha, whom he has never struck nor offended, the child will begin to grasp another relation: that which makes the conduct of others towards him depend in part on his conduct towards them. The child does not need a great effort of intelligence to appreciate, in his own way, the maxims of the gospel, Do unto others, Do not do unto others, and so on, having learned to his sorrow that he must set the example if he wishes to be treated well.

But at the same time that it is strengthening the utilitarian tendencies of our little moral apprentice, the intercourse that he holds with other children opens new paths to his affectionate faculties.

It is not only when he feels on his own account the effects of Paul's brutality, or of Martha's jealous humour, that he protests and takes offence; it is also when he sees his brother or his comrade exposed to the same vexations. He puts himself in the place of the one who is molested or plundered; he suffers with him. Sympathy moves him for the

suffering of others, egoism had moved him till now for his own. "We all have two feelings," said Helvetius, "which are the foundations of society: pity and justice. When a child sees his fellow tortured, he feels sudden anguish; he shows it by cries and by tears; if he can, he will help those who suffer."*

Thus the child's sensibility extends and becomes enlarged; the source of pleasure and of pain, at first bound up in the narrow circle of egoistic impressions, receives new tributaries. The ideas and the feelings of conscience grow accordingly, and, advancing from generalization to generalization, the child approaches the highest point of moral evolution. He is no longer to be disturbed merely by his own comfort; by a generous emotion, he shares the fortunes of others, in the measure of the affection that he feels for them. Moreover, the habit of these emotions will engender an impulse little by little, a tendency to avoid every wrong action, not only because he would have to suffer for it, but because it would cause prejudice or pain to some one else.

We have come, then, to a complex state, in which are mingled several of the essential elements of the moral sense; and if we wished to sum up the different steps of the way travelled, provided we could lend the child a precise language, of which he is as yet incapable, we should say that the child has said to himself: "If I do what is forbidden me—for instance, if I strike my little brother

* Helvetius, *De l'Esprit*, Introduction, vi.

—papa will scold and punish me; it will grieve mamma; my little brother will return the blow; I am bad, for I do wrong to my little brother."

Of course we suppose that no external cause of premature demoralization has changed the normal unfolding of the childish faculties. In many cases, bad inclinations, the instinct of revolt, natural hardness of heart, anger, pride, may stop or retard the evolution that we have described, but they will not prevent the inner force that acts in the child from developing, sooner or later.*

V

The most important point remains: We have been engaged thus far only in a preparatory work; as yet, nothing has appeared that would reveal in the child the idea of a moral law, existing by itself, the feeling of an inner obligation, the notion of self.

* It is a difficult question to determine whether shame exists to very little children. "The child," they say (*Les Enfants*, by Tomel and Rollet, 1892, p. 233), "in his first childhood is chaste, because he has no idea of shame. It is only little by little that this feeling comes." Without going into the question too deeply, it seems certain to us that, in his innocent ingenuousness, the little child knows neither shame nor shamelessness. Doubtless there are found, as the result of perversions of nature, children who, very early, show an unhealthy precocity, but in general the little child is pure; and when he has grown a little larger, shame appears of itself, as by a sort of secret instinct, which has been found to exist even in idiotic children. It seems to us that it is profanely to boldly does, of the sexual instinct in the child of two or three years, or to cite, as Dupanloup allows himself to do, physicians who have seen "amorous nurslings in the cradle."

—properly speaking, in a word, the real conscience. We see, indeed, that Tiedemann's son, always precocious, exclaimed at two and a half, when he believed that he had done something good, "People will say, 'It is a good boy!'" and that he ceased to do foolish things when told that a neighbour was looking at him. But however important this regard for others' opinions may be, in which, moreover, we must see only a new extension of the original desire to be approved and praised by his own parents, timid submission to the judgment of others does not represent in any way the equivalent of the inner judgment, by which the ripe man decides that an action is good in itself, and feels obliged to perform it. How does this decisive crisis of the moral evolution come about, if indeed it does come about? How is the pure and abstract idea of good, the idea that arouses an inner judge in each individual, substituted for the fleeting interests, for the movements of sympathy that we have analyzed? We do not hesitate to answer that it is education, education alone, that can, in aiding Nature, produce this definite transformation.*

If we gave it time, by the energy of its own reflections, in the experience of life and at the school of sorrow, the conscience would finally be formed without special teaching; in time it could produce all of its effects without any help from without.

* Such is also very nearly the opinion of Marion: "As to the moral sense, I have found nothing resembling it in the nursing child. It will appear much later, in great part as the result of education." (Marion, *Les Mouvements de l'enfant*, *Revue scientifique*, vol. lxv, p. 770.)

Indeed, this unaided formation must be possible, since humanity has come out of a savage state, and morality has been founded. But if you abandon the child to his own strength, you cannot reasonably demand such an effort of abstraction. A contemporary educator has gone so far as to write: "There is nothing at the bottom of the child's moral sense; the morality of children is not different from that of grown people, inculcated by the latter, practised by the former, according to their strength, by interest, by sympathy, by obedience, by self-love; never, we believe, by the rigid feeling of duty alone, of which we believe them to be absolutely incapable." * Incapable by themselves, perhaps, but not when education aids. Education can hasten the march of ideas, can at least initiate the child into the truths of conscience, and spare him in part the painful slowness of an exclusively personal elaboration of the moral sense. Doubtless no one will ever bring complete clearness into the child's conscience; but the lessons of the family or of the school may sow very early in his soul, as in a soil well prepared by nature, the seeds that subsequent education will develop. And if it is true, as Quinet thought, that there is nothing of value or worth in the man that was not prepared for in the child, it is greatly to be hoped that it may be so here, and that we do not deceive ourselves; that ideal morality may be mildly suggested, insinuated, that it may be in fine, not the late fruit of experience, but as an emanation of conscience already formed and organ-

* Al. Martin, *l'Éducation du caractère*, Paris, 1887, p. 70.

ized, which is transmitted, so to speak, to the nascent conscience.

Recall the advice of educators on this point. Mme. de Rémusat wishes that in governing the child the word of obligation, *ought*, might be substituted as soon as possible for the word of necessity, *must*.* Such is the opinion also of Mme. Guizot, who declares that she has seen the power of moral ideas in children from six to seven years old.† She says: "Do I not see children, already sensible to the good, finding in it the motive and the reward of their efforts? Sophie's zeal would make her enthusiastic for a lesson in which she could find no other pleasure than that of doing right; and Louise too could repress the desire to strike her little playmate, who broke down her card-house, content with being able to say to me, 'Have I not done well, mamma?'" Michelet, positive as he always is, goes still farther. "Is *you ought* a complicated idea that asks for explanations? By no means. In the world of work, *without education*, and without reasoning, by a simple intuition, one very early learns the notion of duty."‡ Michelet forgets that in this "world of work" of which he speaks he admits by hypothesis the existence of regular habits, of virtuous examples, which are themselves an education, the best of all.

Assuredly lessons may have their influence, provided they are simple, appropriate to the child's

* Mme. de Rémusat, *Essai sur l'éducation des femmes*, p. 111.

† Mme. Guizot, *Lettres de famille*, etc., vol. i, p. 103.

‡ Michelet, *Nos fils*, p. 137.

small experience. But we must guard against meriting the reproach that a witty writer addressed very lately to the teaching in primary schools: "The official programs of morality are superb," he said, "but they are like trying to prevent little Gustave from stealing apples from a neighbouring orchard, by reading him the Vicar of Savoy's Profession of Faith." We shall not read the profession of faith to him, but in language not less solemn, we shall call his attention to what there is in common in the different duties that we accustom him to perform. We shall emphasize the pleasure or the discomfort that he already feels in doing right or wrong. We shall honour his good actions and shame his faults. While counting a little on exhortation and talking to him, we shall depend above all on action, on exercise, and on example. It is from the individual practice of virtues that the idea of the good is born, and from the exercise of liberty that the idea of responsibility springs. It is also in seeing all those who surround him submitting to the same rule, that the child experiences and grasps the fact, living and active, the universal moral law. What Marcus Aurelius said of the different virtues—"My grandfather taught me patience, to my mother I owe piety, to my father modesty"—is no less true of conscience itself, which is the principle of the particular virtues. It is by contact with the conscience of their father, of their mother, of their teacher, that the conscience of children is always developed, when they are so fortunate as to have but to continue in their personal education the work of their first years.

If a counter proof were desired—that is to say, facts to show that to the absence of education corresponds a radical weakness of the moral sense—it would be enough to open the books that treat of criminality in children. We do not confound the moral sense and practical morality; but it is permissible to judge of the tree by its fruits, to appreciate the state of a moral consciousness from the outward acts that manifest it. Indeed, of 9,906 children who in 1875 were confined in penitentiaries or in reform schools, 4,543 were orphans or half-orphans; 154 were inmates of alms-houses—that is to say, they had been deprived of all family training; 1,518 were illegitimate children, brought up amid dissolute surroundings; 1,615 were born of parents that had served sentences, and consequently they had received lessons in immorality.* How shall we answer a precocious criminal who declares before the jury: “I have never met any one who was interested in me; as a child I was given over to any chance that might arise; I am a wreck”?

It would be easy to multiply examples of this sovereign influence of early education on the morality or the immorality of children. But this power of outward excitations does not at all exclude the action of nature; it would even be incomprehensible without it. The child would not be disposed, as he is from the first days of his life, to bend before parental authority, if he did not already suspect, by a sort of secret instinct, the general law of duty in the will of his parents, if he did not half

* Othenin d'Haussonville, *l'Enfance à Paris*, 1879.

comprehend the fact that his mother's and his father's orders were doubled, so to speak, by a moral authority. The error of those who dispute the relative innateness or heredity of the moral consciousness, results from the fact that they consider as innate, as the distinctive work of nature, only what appears from the very first hours of life. Would they say that it is not natural for the plant to bloom because the flowers do not show themselves on the stem until a certain moment of its evolution? Would they say that certain forms of insanity—the suicide mania, for instance—are not hereditary because the morbid germ, after long years of latent life, larva-like, as physicians say, does not burst forth in the descendants until they are at an advanced age, at forty or fifty years? In spite of the fact that certain circumstances are necessary to make it burst forth, the moral consciousness is none the less a distinctive characteristic of man. To what extent, moreover, nature and education work together in organizing it, it is perhaps impossible to say with precision; for in this perpetual exchange that is going on between what is within and what is without, we can never know exactly what the child contributes himself and what he receives from others.

What is certain, at least, is that at no age can he or ought he to remain a stranger to moral culture. Let us not suppose that speech can serve as our only instrument of education; actions speak louder than words, and can precede them. Of course there will be some scoffers to find it strange that, in respect to this little pink-and-white being,

who stumbles as he takes his first steps in life, who cannot yet walk alone, the philosopher dares to raise the high question of the government of self, of conscience, and of morality. All, however, who know how slow the evolution of the faculties is, to what long and indiscernible roots, stretching out into the child's past, are attached the flowers and the fruits of maturity, will be interested as we are in these first obscure flutterings of the moral life. It is never too early to put the future man at the school of duty.

Paradise lost, that is for each of us the *ensemble* of impressions of first childhood, the new and naïve joys of the first years. It is there, indeed, that our destiny is being decided; it is there that the focus of good influences, or of bad inspirations, is being formed, to accompany us through our whole lives.

This is why it is not an anachronism to think from the cradle of the responsibility, the moral obligations, that will one day rest on the head of the little child, smiling now in his unconscious innocence, his ideas and his feelings only the reflections of those of his parents; just as his left cheek or his right cheek, when he has finished nursing, like one side of a peach gilded by the sun, remains very red for several minutes, warmed as it is by the touch of the mother's breast.

CHAPTER VI

WEAK AND STRONG POINTS OF CHARACTER

- I. The child's original innocence.—Optimists and pessimists.—Contrary exaggerations.—The little child evidently puts no moral intention into his actions.—He has no idea either of evil or of good. II. The child's faults.—Different opinions.—Ignorance, lack of foresight, explain the so-called instinctive cruelty.—The child is a Cartesian, without knowing it.—Lying.—Lying is not an hereditary vice.—Analysis of the causes of falsehood.—Apparent falsehoods.—Falsehood is born of fear.—Predisposition to deception.—Power of simulation observed in older children. III. Is there an instinct of theft?—The child's love of dainties.—The part played by example in gluttony.—Other faults.—The lack of reflection is most often the cause. IV. There are innate dispositions that are really bad.—Jealousy, anger, consequently the need of doing harm.—Anti-social instincts.—Are there born criminals? V. The child's good points.—The instinct of liberality counterbalances the avaricious instinct.—Sympathy and tenderness.—Particular attachments.—Social sensibility.—Sense of justice.—Remorse and repentance.

I

NOVELISTS, poets, and even philosophers like to imagine the child as being in a state of perfect purity, of original innocence. "Childhood," wrote Edmond About, "is a spring direct from the mountain; it is moved without being troubled, because it is pure to the very bottom. . . . The innocence

of children is like the unsullied snow of the Jungfrau, which nothing has touched, not even a bird's foot." Bernardin de Saint Pierre said in the same way: "It is children who remove the corruption of society, by bringing to it new and innocent souls. New generations resemble the dews and the rain of heaven, which refresh the waters of the river, sluggish in its course and ready to be corrupted." Who would not like, if reason authorized it, to linger over this sweet dream? A new humanity for each generation, it would mean, beginning anew the course of its destinies, incessantly rejuvenated and renewed by these pure souls of children coming into the world, without a past, white pages on which education could freely write all that she would. It is true that the hypothesis has its reverse side; in not inheriting the faults that our parents transmit to us with life, we should not, on the other hand, profit by all that the work of generations bequeaths to us in the form of germs of happy talents.

But of what good is it to insist on the imaginary consequences of a radically false conception, whatever the majority of mothers may think while cradling their child and enjoying the same illusion? The first error is in believing that the child is an absolute beginning, a *tabula rasa*, as Comenius and Diesterweg suppose, to cite only these.* It is

* Imbued with the ideas of Bacon, Comenius accepted the *Nihil est in intellectu quod non prius fuerit in sensu*, which amounts to saying that the acquisitions of experience are everything. As to Diesterweg, although he has usually little taste for philosophical generalizations, and, although he contradicted himself later, he said

abundantly proved to-day that from nature or heredity each creature brings with him at birth his own dispositions, his own aptitudes. His history is partly written in advance, not in the mysterious book of destiny, but in the annals of his ancestors. The child does not start from nothing and arrive at everything. He is like a medal, new doubtless, but formed in an old mould; and the more that we observe him, the more we discover and decipher characters at first illegible and obscure, but deeply inscribed and engraved.

When the chimera of an indeterminate primitive state, deprived of all pre-established form, has been cast aside; when educators and parents see that they no longer work a void, but that they will have to reckon with all sorts of instinctive inclinations, it then remains to prove to them that these inclinations are not all good, that they are not solely the gifts of a benevolent fairy. Sometimes they are only too much like the inspirations of a malicious spirit; in a word, the child does wrong as naturally as he does right. If we put aside the illusions of paternal and maternal love in studying facts, they contradict only too easily what in England is called the dogma of Lord Palmerston, and what we might call in France the dogma of J. J. Rousseau. In every one of us there is a fund of vicious dispositions, exaggerated in some by the bad antecedents of the race, but in all more or less apparent, which

in 1835, following his compatriot Beneke, that "there is nothing innate in the soul, apart from a certain degree of excitability, and a certain degree of energy and of vivacity, on which depend the perfection and the rapidity of the sensation."

oppose to the most vigilant education their indestructible germ of evil. So, to the "adulation of childhood," to those who say with Rousseau, "The first movements of Nature are always correct," or with Mme. Guizot, "No inclination is bad in itself," we might answer by an appeal to contrary protestations—no less false, to be sure, in their absolute exaggeration—which are made at all times. "We are born children of wrath," says St. Paul; "All are born for damnation," says St. Augustine.

Truth lies between these two extreme opinions. Optimists and pessimists are equally wrong. It is in vain that Mme. Guizot splits hairs, and ends her long and laborious discussion with this astonishing conclusion: "We are bad simply in the sense that we are not good." It is sophistical to pretend that the bad has no reality, for the subtle reason that the bad is simply the absence of good. Try, then, to console a blind man or a cripple by showing him learnedly that he is not unfortunate since his misfortune consists merely in the privation of an eye or of an arm. But it is certain, as facts will soon show, that several of the child's instincts are positively vicious, and that they contain an effective germ of evil. Even when we allow to Mme. Guizot that the evil is not born of the inclination, that it results from the perversion of the inclination, it remains nevertheless true that this general tendency to perversion, which, in the child as in the man, alters and corrupts even the naturally good inclinations, is by itself a bad instinct.

This said, we must add immediately that in the manifestation of his instincts, whatever they may

be, in the acts that he performs, the child puts no moral intention. It may be questioned whether the "pure taste for evil" exists even in the adult. With how much more reason should we question it in the child! Man is not naturally a moral being; he becomes one only little by little. Just as the child's good actions never evince a real morality, so his faults, his obstinacy, his foolishness, never result from an intentional perversity. In the evil, as in the good, he is unconscious. We ought not to listen to Mme. Necker de Saussure, when she pretends to find in a very little girl the bad will to do wrong for the sake of doing wrong, any more than we should accept Darwin's testimony when he believes that he sees a beginning of repentance and of moral shame in his little sugar thief.

The little girl of whom Mme. Necker speaks,* would have disobeyed for the sake of disobeying. "We saw in her, at the age of eighteen months, the struggle between observing the rule and defying it. When alone with her mother, who was sick in bed, she came one day, without the slightest motive, to open revolt. Dresses, hats, hand-screens, little nicknacks of all sorts, were put on the floor in the middle of the room. She sang and danced around the pile with joy unspeakable; her mother's anger had no effect in stopping her. *She had certainly the idea of evil*; her heightened colour showed the reproaches of her conscience, but the pleasure consisted in stifling the voice of that conscience."

In this little family scene we believe that there

* Book III, chap. vi.

is only a frenzy of movement, one of the crises to which the child's natural need of activity leads when it is superexcited; there is not depravity of will, a malicious joy in braving the rule and shaking off the yoke. At most we might see in it the explosion of the instinct of independence, the satisfaction of showing one's strength, of exercising one's liberty. It is not remorse, but pleasure that heightens the child's colour and gives full play to his petulance, in a real fit of passing mania. He does wrong without the will to do wrong entering at all into his conduct. Little Macha, the heroine of one of Tolstoi's tales, who at the age of three sets the haystacks on fire and stamps with joy before the blaze that she has kindled, evidently has no thought of the disastrous consequences of her action.*

II

Let us now go into detail and examine in turn the faults and the good qualities of the child; the faults first.

People are not contented to denounce the bad instincts of childhood in general terms; they have set up against it formal specifications. Dupanloup has even attempted a classification of its faults.†

It is well, nevertheless, to call attention to the fact that the charges directed against the child are

* Léon Tolstoi, *Pour les enfants*, Paris, 1888, p. 111. Note, moreover, that the incendiary mania, quite frequent in children, is most often the result of cerebral disorders and of epileptic diseases.

† Dupanloup, *l'Enfant*, 1874, chap. ix.

far from being as numerous as the panegyrics composed in his honour. Is this a proof that in the childish nature the good far outweighs the bad? Have the graces of the early years merited the indulgence of their judges? It is generally understood that in the case of every parent the heart blinds the reason, so that people's own children are the most amiable in the world. And although we are more disposed to see the faults of other people's children, even here some tender and complacent sympathy softens the severity of our judgment.

Note also Émile Deschanel's experience in the ingenious anthology that he composed thirty years ago under the title *The Good and the Bad* that has been said of Children. The first part—the good—is very full; the second is so empty that the author cannot succeed in hiding the fact. Struck by the antithesis, and also by the remembrance of another of his writings, *The Good and the Bad* that has been said of Women, in which the chapter on the bad had furnished a rich morsel of scandal, Deschanel wished to draw from the enemies of childhood. But apart from the sallies of some surly minds, or of some "useless bachelors," such as Boileau and Chamfort, Deschanel has found nothing with which to fill up his outline; so that, in order to increase his little volume, he is reduced to reproductions of the legends of the *Enfants terribles* of Gavarni, stories that show less the wickedness of children than their acuteness and their wit.

It is a bachelor, La Bruyère, and a bishop, Dupanloup, who have most learnedly established the catalogue of the child's faults. In a single sen-

tence, which—moreover, aims at the whole of humanity over the heads of children—the author of *Caractères* traces a not very flattering picture. “Children,” he says, “are haughty, disdainful, angry, envious, curious, selfish, idle; fickle, timid, intemperate, deceitful, insincere, . . . they do not want to suffer wrong and they love to do it; they are already men.”* Dupanloup distinguishes three sorts of faults—corporal faults, intellectual faults, and, finally, moral faults, the only ones with which we are occupied now. In this numerous family of the origins of sin, the author of *l’Enfant* establishes a whole genealogy: first the natural faults, harshness, rudeness, capriciousness, mobility, dissipation, talkativeness, indiscretion; a second category includes the faults called by the queer name “*supernatural*” under the pretext that they are “above all opposed to the virtues of grace and represent in man a more marked effect of the loss of original justice.” These have for cause the triple concupiscence, pride, sensuality, and, finally, cupidity or curiosity, which is the cupidity to know. Pride itself is the source of four principal faults—the spirit of indocility, the spirit of independence, the spirit of contradiction, the spirit of justification.

We have cited this only because we wish to omit nothing, but it is more a theological than a philosophical sketch, a somewhat fantastic enumeration, in which things are seen from too high a point of view, across the troublesome question of original sin, in which curiosity and the instinct of

* La Bruyère, *Caractères*, chapter on Man.

independence are presented as faults, and from which, on the other hand, are omitted the most authentic infirmities of the child's soul, jealousy and anger.

While acknowledging that Nature has sown tares by the side of good wheat, we could not admit that the foundations of all the child's inclinations are spoiled. How much more fair and more exact is the philosophy of an humaner inspiration, which, on the contrary, proves that for the most part the child's faults result, not from original perversion, but from the bad influences of a badly conducted education! It is this education which, as Froebel* says, has turned the faculties, the forces, and the aspirations of the child from their natural path and has prevented their full development. How much better, also, the method of impartial observation, which we shall follow, and which explains many actions, apparently bad, not by a vicious precocity, but by an intellectual insufficiency, by ignorance, by the lack of foresight and reflection in the child, who cannot yet calculate the real trend of all that he does! It is in this way, for instance, that we can explain the instincts of cruelty attributed to the child.

"This age is without pity," said La Fontaine, who assuredly did not love children as he loved animals. To judge from appearances, La Fontaine was right. But the asserted cruelty of the child who tortures animals is only ignorance.† The child

* Froebel, *Education of Man*, p. 100.

† We must acknowledge that in certain natures very early perverted, conscious cruelty appears. The story is told of a little

is a Cartesian without knowing it; he makes no difference between his punchinello and his dog. If the doctrine of the automatism of beasts had not had the good fortune to occur to a great philosopher, it would have found at least perpetual adherents in all these little executioners of two or three years, who torture their favourite animals only because they do not know that they are hurting them.

From the day when he suspects that in pulling feathers out of a bird or in pulling the cat's tail he is causing suffering akin to what he feels himself when he is maltreated, the child usually discontinues his cruel play. If he persists, in spite of the suffering animal's cries, it is because his curiosity is the stronger.*

André Theuriet tells in the memoirs of his youth that at the age of four years he took a fancy to seize four new-born puppies and carry them to the fountain, "just to see." "When I saw them," he says, "miserably swimming and struggling in the water, I had a consciousness of my infamy; my sensibility was aroused, and I wanted to rescue the

girl who co-operated with her parents in torturing her little brother. She placed a pin between her teeth, then asked the child to come and embrace her; the latter trustfully approached and the pin stuck into his flesh. But here, as in similar cases, it is a question of children relatively grown, whom example and education have perverted.

* Mme. Necker de Saussure seems to us to force the pessimistic note when she claims that for the child torturing an animal the cream of the pleasure consists in defying the emotion that he feels in hardening himself against pity, and having the strength to be cruel. (Education progressive, Book III, chap. vi.)

poor things. When I failed in doing this, I fled, full of terror, thinking in my soul of four years that hell, of which my mother had often spoken to me, would certainly punish such misdeeds."

The child's conduct, then, when he maltreats animals, comes from the same needs that make him tear open his cardboard horses or demolish his drums: from an eagerness to know, and also from an imperious tendency to act, which works heedlessly. Froebel tells us of a child who was not careful enough of the pigeons that he was raising; he even aimed at one, one day, and hit it with a stone, killing it. Curiosity, need of action, and ignorance—these suffice to explain and to justify most of the wrong deeds charged to the child's cruelty.

It is more difficult to analyze the many causes that make falsehood so common in children that Montaigne could say, "Falsehood grows as fast as they do." At the risk of seeming optimistic, we shall not hesitate to say that falsehood is not, as certain observers of childhood claim, an hereditary vice, nor a nearly universal vice. If the child has not been subjected to bad influences, if example has not perverted him, if a discipline of repression and constraint has not driven him to seek a refuge in dissimulation, he is usually frankness and sincerity itself. All that he has on his heart he says; he says too much for the taste of some parents. We all know the indiscretions of "enfants terribles"; they are all "enfants terribles," more or less. They tell everything, what they have done, what others have done. The bad fault of tale-bearing most often results merely from the need of telling every-

thing. "My little rogue," says Guyau, "always comes to tell me, sometimes to boast, sometimes with a contrite air, all the foolish things of his day." I myself have observed a child of seven years who had never lied, and who came to confess his fault before I had discovered it, saying to me in a trembling, sheepish air, "I think, papa, that you are going to punish me; I have done this or that."

It is true that the child is not contented with telling what he has seen, what he has heard; he also invents, but this invention is only a play, an innocent travesty of the truth. In the first awakening of his imagination he delights in fiction, and he plays with words as he plays with sand, with pieces of wood; he makes sentences without thought for reality, in the same way that he constructs houses, imaginary châteaux. Guyau reports this trait of his child: "Just now he said to himself in an ordinary tone, 'Papa talks badly, he said *sevette*; baby speaks nicely, he says *serviette*'" (*napkin*, the second being the correct form). Naturally, this was the opposite of the truth. A little girl of two and a half years uttered, with the intonations of a real sentence, a long series of sounds utterly without sense; she concluded drolly by saying, "That is what you do not understand, papa!" She did not understand it herself; she did not attach any signification to the words that she strung together by chance; she was playing. It was almost the same motive, with the added desire of making a sensation, that inspired in Darwin, when a child, the habitual falsehoods of which he accuses himself in his *Memoirs*. "I once gathered much valuable

fruit from my father's trees and hid it in the shrubbery and then ran in breathless haste to spread the news that I had discovered a hoard of stolen fruit." *

Real falsehood, moral falsehood, which presupposes the intention of deceiving, is born only of fear. If treated with kindness, the child remains trusting and sincere; if terrified by our severity, he dissembles and he lies. "Who has broken this piece of furniture?" we cry out in anger. The little culprit, frightened, answers, "It was not I." It would be better, says Miss Edgeworth, to be resigned to having things broken, than to put the child's sincerity to test. As, unfortunately, this advice is often neglected, as too many parents scold unceasingly, right or wrong, the child covers his weakness with falsehood as with a buckler.

Give imitation its due also. Prompt to grasp all that goes on around him, the child does not delay in perceiving that truth is not always respected in the conversation of his parents, nor in that of the servants. If it were only the commonplace falsehood heard each day when near the door, "Madam has gone out," it would be enough to make him unlearn his natural sincerity.

There is then no hereditary tendency to falsehood, whatever may be the opinion of Perez,[†] who claims that we can notice "from the cradle, at least in some children, the signs of an innate disposition to concealment, to dissimulation, to ruse." Apart

* Life and Letters of Charles Darwin, p. 27.

† Perez, *l'Éducation dès le berceau*, 2d edition, p. 279.

from the fact that it has never been granted to us to meet these little hypocrites in long clothes, who would lie in some way even before they could speak, we think that if they do exist at all, the general tendency to deceive, to dissemble, would be in them only an acquired disposition. Nature and heredity make some children more idle, more rebellious; circumstances place by their side stupid or violent parents; and in that case, being more inclined by their temperament to commit faults, which on the other hand bring a more severe repression, children are more often led to lie, more disposed to make falsehood a habit.

Let us not deny, nevertheless, that in the child, as in woman, a natural keenness, joined to weakness, is a predisposition to little ruses, to little artifices. Witness, for instance, the child who, having said to her mother in a moment of ill-humour, "Bad!" went on after a moment of silence and corrected herself timidly, "Dolly bad." The same little girl, observed by L. Ferri, pretended to feel a need that she did not feel, in order that she might be allowed to get down from the table and run to her play.

The child is not born a liar; he becomes one, but with awkwardness; most often he is prompt to take back his first falsehood, only to invent another, ending, after many contradictions, by avowing the truth. As Ratisbonne said:

"... L'enfant vaut mieux que l'homme:
Il sait déjà mentir, mais non dissimuler!" *

* Compare Herbart (according to Dereux's *Psychologie appliquée à l'éducation*): "Look at children, especially in the first

But, you say, how reconcile all this with the heart-breaking instances that forensic medicine furnishes us, when it shows us children before justice, accused or testifying, imagining with an extraordinary facility and holding with a heart-rending obstinacy all sorts of false stories, with details as false as they are exact, whether to excuse themselves or to charge some one else? We must acknowledge that sometimes there is found in children an incredible power of simulation, but only in children of ten or fifteen years, who have been spoiled by unhealthful surroundings, who have learned at the sad school of misery that knavery and deceit are weapons in the struggle for existence, and that they can be useful only if they know how to manage these with assurance and with bluster. Therefore their tenacity in falsehood, which is often only a lesson that has been taught them. Sometimes they end by believing themselves the fables that they report. In other cases, the vainglory of playing a rôle upholds them in their imperturbable assurance. But these are the vices of "Gavroches," of perverted little "gamins"; at the most, vices of the family which are developed only in appropriate mediums, in fellowship with other vices, and which Nature usually spares children that are well-born, and in any case very little children.

years, when the domination of a set form of egoism has not yet been established. This is the age when they cannot deceive; their words and their actions are the immediate expression of their imagination."

III

Let us return to the faults of early childhood. People insinuate very freely that it has the instinct of theft. Doubtless particular, exceptional inheritances in the civilized world—habits of race in a savage people—elsewhere a special education like that at Sparta or in the Court of Miracles, may produce precocious thieves. But it would be a calumny on childhood to generalize on this subject. All that we can say, to be just, is that the child has not, instinctively, the idea of property at all. Should we be surprised at this? It is so difficult to define property that we can pardon the child, at three or four years, for not having a very clear notion of it. He has not yet studied the code. He does not always meet the gardener Robert, who explains to him, as Rousseau had done to Emile, the origins of property. At two years, Tiedemann's son did not allow his sister to sit on his chair or to take any of his clothes; he called all that his *affairs*. But, on the other hand, he had no scruples against taking his sister's *affairs*. Legouv  sums up the question very aptly when he says: "The child has not the instinct of theft, but he lacks all instinct of the property of others."

It is ignorance, too, imprudence of children and of parents, that engenders one of the passions of childhood, the liking for dainties. We shall not excuse it by saying that it is a sign of health; we shall not agree with Herbert Spencer in believing that the child's appetites are infallible, that he gorges himself with sugar only because sugar is a

food that he needs, that if he were left to himself he would never give himself indigestion, that his intemperance is only a reaction against unjust privations. No, we must recognise the fact that the child has inordinate appetites as well as inexplicable dislikes. If he is not stopped, he will go far beyond the limits of hunger and of thirst for a favourite dish, for a preferred drink. And whatever is done to him, he will refuse with a repugnance that it is impossible to conquer, dishes that he will be very fond of a little later. The first lively scene that I recall having had with one of my sons came about in the early vegetable season over a dish of peas which he did not wish to eat. Supplications, threats, the dark closet, nothing had any effect. Tired of the struggle, we had to yield to the child's unconquerable disgust. It is easier to see the reason for immoderate tastes. In the beginning experience very soon teaches the child what inconvenience he may feel as the result of eating too much cake, too much fruit, of unrestrainedly satisfying his gluttony. In itself this liking for dainties has nothing vicious in it. Why should we be disappointed that the child seeks eagerly for what brings him a pleasant sensation? Moreover, it is often our own intemperance that serves as an example to the child. What should the little glutton do, if not desire with excess his share of the dainties that load his parents' table? To judge of the true nature of the child, before maternal weakness or bad example has altered it, we should have to take the nursling. Whoever has seen a child nurse, knows well that when once satisfied, he stops of his own accord; he

plays on his mother's lap; he smilingly puts his little lips towards the source of abundance still open before him; he takes it again, then lets go, but he does not press it again after he has been sufficiently nourished.

The indiscretion of parents is also the principal instigator of childish vanity. "Every species of flattery should be carefully avoided; a boy who happens to say a sprightly thing is generally applauded so much that often he remains a coxcomb all his life."* You will remember the story of the little girl who, having been complimented in the morning by her mother for a saying more or less witty, said in the evening before a visitor, "Mamma, aren't you going to tell the lady what I said this morning?"

What is there that they do not reproach the child with? His restless mobility? But when a man, even serious and reflective, comes for the first time into a strange land, is he not restless and agitated? Is it so surprising that the child, before this new world in which he has some trouble to get his bearings, where so many different objects appeal to his senses, should thoughtlessly direct his nascent attention first to one side, then to the other?

His waywardness? In the first place, this is not so general nor so precocious as people say; and if some rebellious spirits are found from the very cradle, are we sure that parents have not had their influence, that from the very first hours there may not have been actions or words that have called

* Oliver Goldsmith, *Essay on Education*.

forth by reaction these movements of insubordination? As far as appears ordinarily, the child's instinct of independence is only the necessary first manifestation of character and of will. Would any one want Nature to make slavish souls, in which no slight desire to resist should give evidence of future liberty?

His egoism? Is it not, in its *naïveté*, only the pardonable explosion of that self-love of which no philosopher would wish to contest the legitimacy, since it is one of the essential forces of life?

If well led and tempered by sympathetic feelings, the personal inclinations of the child will be virtues later, and will be called in man courage, strength of character, love of glory. People find so many faults in children only because they try to submit them to a common measure with man, because in judging them they apply the same rules that they use in appreciating the merits of adults; because they forget that the child's inclinations, even the worst of them apparently, are the natural conditions of this moment of transition, of this crisis called childhood; because, finally, they do not think enough of all the particular characteristics imposed by the lack of reflection and the inevitable thoughtlessness of this first age on a little being, who is not, as people have wrongly said, a diminutive man, but simply a sketch, an outline in a fair way to be filled in.

Note the charming book, *Helen's Babies*, which has made its author, an American, John Habberton, famous. It treats of two children and tells all the fancies, the absurdities, that could be suggested

by the inventive imagination of two little fiends, who for two weeks pester with their unreasonableness and their caprices a good-natured uncle to whose care they have been intrusted, who, in short, indulge in all the liberties allowable to two future citizens of free America. The moral that follows from the amusing story of these two "enfants terribles" is, as the translator of the French version, William Hughes, states it, "the right of babies to be indulged"; in their own mishaps, as in the frolics that make their guardian lose his head, they give proofs of thoughtlessness, of improvidence, much more than of wickedness.

IV

When we have given due weight to the part of stupid or vicious education, when we have multiplied the extenuating circumstances to reduce and soften the responsibility to be thrown on the child, or at least on his nature, there nevertheless remains some bad at the bottom that no indulgence can cover, a residue of innate dispositions which do not lend themselves to friendly interpretation. Not only is the child perverted in certain cases by social surroundings; he is naturally perverse, or if the word seems too harsh, he is at least in his complex nature led towards the wrong as well as towards the right.*

* "The popular idea that children are innocent, while it may be true in so far as it refers to evil *knowledge*, is totally false in so far as it refers to evil *impulses*, as half an hour's observation in the nursery will prove to any one." (Moral Education, Herbert Spencer, p. 206.)

To tell the truth, it is because he is already a little person very much alive, very ardent in his tastes, very sensitive to pleasure, very rebellious against all that produces a disagreeable sensation, that the child is accessible to the little passions of which we are now to speak. Imagine, if possible, a being capable of loving, of feeling pleasure and pain, never impatient, never irritated by people or things that do him harm, that deprive him of what he likes or impose on him what displeases him. Perhaps reason will one day perform this miracle in a reflective man; but it is not to be expected at three years, at five years! Do not ask them for what is impossible; that the child's soul—in which sensibility rules, in which, as the Greek philosophers say, the *ἐπιθυμία*, the blind desire, is not ruled yet by the *νοῦς*, by reason—should be exempt from these emotions, from these passions, which are only the revolt of a desire that is interfered with. The only two clearly marked passions that exist in the child, anger and jealousy, are of much the same nature; the one breaks out violently in cries, in gestures, in words, against all that displeases him; the other, which is a silent anger, betrays itself by sadness or by angry looks.

Jealousy has been defined as "the bad feeling that one experiences when one does not obtain or does not possess the advantages obtained or possessed by another." In order that these advantages should be envied, it is necessary that they should be appreciated, and the child's jealousies are confined to the narrow circle of things of which he knows the value. He will not be jealous because

his brother has a better-shaped nose than his own, nor because his sister is brighter than he; as yet he has no wish to compare himself with others so far as his physical or his moral traits are concerned. But he will be jealous for his toys, for clothes, for books, for all that brings him pleasure.

Being fed, the child's first pleasure, will be the first occasion for his jealousy. St. Augustine noticed this. "Little children," he said, "are innocent in their body by reason of their weakness; they are not always innocent in their souls. I have seen a child sick with jealousy; he did not speak yet, but was very pale and cast bitter glances on other children that were being fed with him."

Later, when the child has a taste for caresses and for his parents' affection, it will be a sorrow to him to have to divide with others. Darwin says: "On seeing me caressing a doll, my son, when fifteen and a half months old, showed his jealousy very clearly." This will be noticeable, above all, when the presence of a new brother will cause him to have only half as much spoiling as he enjoyed alone before. If parents favour one of their children to the detriment of the others, the little ones that are slighted will have a deep feeling, not only of sadness and of melancholy, which could lead them to the point of despair and of suicide, but also of envy and of hate towards the preferred ones.

Anger is often only jealousy breaking forth, but it can have other causes. It is one of the first and one of the most frequent manifestations of the

childish sensibility;* it is produced in connection with every disagreeable impression, of whatever nature it may be, not only against persons, but against inanimate things. A baby two years old gets angry at his punchinello and strikes it, just as he would strike his brother or his sister.

Darwin has studied anger in children more thoroughly than any one else. However disposed he may be to notice its appearance from the earliest age, he warns us that some of the outward signs of anger, the contraction of the face, frowning, a general air of discontent, easily recognisable from the first weeks, may be only the expression of a simple feeling of suffering. "But when my son was nearly four years old," he adds, "it became evident from the way that the blood mounted to his face and made him blush even to the roots of his hair that he easily threw himself into a fit of violent anger. The slightest cause sufficed; thus, a little after seven months, he began one day to utter shrieks of rage because a lemon slipped from his fingers and he could not grasp it." Anger has this characteristic: that it not only finds in the depths of the soul feelings of ill-will and of enmity; it calls forth outward actions; it makes the child, as it does the man, and even more than the man, employ his hands to strike, his teeth to bite,† and

* "The date of the appearance of anger," says Dr. Sikorski, "cannot be determined precisely, although it is generally supposed to be developed during the first year of life; in any case, it certainly shows itself in the second year."

† Darwin indicates as one of the signs of anger the act of raising the upper lip and showing the teeth. "A Bengalese child,"

use the first weapons that come in his way. Young children, when in a violent rage, roll on the ground, screaming, kicking, scratching, or biting everything within their reach.* This is no longer anger alone, it is rage, the rage of the feeble and the powerless, the more violent as it is allied with less of power.†

This threatening offensive, which the child, as he grows older, tries to render more terrible, undoubtedly results from a secret need of injuring, of harming the persons or the things that are the objects of his anger—a totally unconscious need at first, in which the wicked intention develops only little by little. This is Darwin's opinion: "At eleven months, when any one gave Doddy a toy that he did not want, he repulsed it and struck at it; I presume that this latter action was an instinctive sign, as is the movement of the jaws of the young crocodile only just coming from the egg, and did not show at all that the child believed himself to be harming the toy." But a little earlier, a little later, the thought of doing harm appears, and it becomes evident that the expressive and active mimicry of the child in anger is not only the weakened reminiscence of acts of violence performed by his

he says, "who was accused of a misdeed, did not dare to vent his anger in words, but he frowned, and by a particular movement he showed his eye-tooth on the side towards the accuser."

* Darwin, *Expression of Emotions*, p. 241.

† Even in the case of anger we must give the blame to bad education. "Who has not seen an absurd nurse who says to the child every day: 'Kick the bad table. Strike the naughty chair,' and so on." (Nicolay, *op. cit.*, p. 321.)

ancestors; it is certainly the indication of an ill-will that ends in evil-doing.

It is necessary to notice, moreover, that concerning irascible dispositions, as in other things, a difference is perceptible between individuals. Children, we believe, are more angry than men; and this for two reasons: because they are weaker, and because they are less reasonable. Anger is a protestation of weakness; it is also a "short madness." But between children, according as the temperament is more ardent or more timid, there are notable inequalities in the propensity to anger. Sex also plays a part. It is an interesting observation of Darwin's, but one that needs to be verified, that in girls fits of anger do not seem to reach the same paroxysms that are found in boys. "At two years three months, Doddy had a habit of throwing books, sticks, or other objects at the head of any one that had displeased him, and I have seen the same thing in several others of my sons. On the other hand, I have never seen a trace of such a disposition in my daughters." And Darwin concludes, not without some absurdity: "This makes me suppose that boys receive by heredity a tendency to throw objects." We would rather believe that the tendency is general, that it is explained simply by the greater timidity of little girls.

The truth of the matter is that it is the signs of anger, chiefly, that vary; although more concentrated in one, more outward in others, it shows itself in all. We ought not to be astonished at this, since even in grown men it takes on very different appearances. Sometimes it makes the face redden,

sometimes makes it pale; sometimes it calls forth movement, sometimes it paralyzes movement. Perhaps a deep psychology might show how to these different marks of anger correspond degrees, distinct shades of the same feeling, from pouting, which the child shows by his frowns and by his lips, to the fury that excites and convulses his whole body.

However this may be, we cannot hide the fact that, in spite of his charming candour, the child early cherishes some of the bad feelings that Bain calls "anti-social instincts." In his heart there are seeds of malignity, of hatred, of evil inclinations, a certain need of destructiveness. To disturb, to undo, to tear, to destroy, to kill—these are his daily joys; passionate and wicked movements, which can neither efface nor make us forget the contrary movements of kindness and of sympathy, which follow them with the inconstancy and the mobility belonging to childhood. Sometimes it seems as though the child took pleasure in plaguing and tormenting others. He often wants things, less to possess them than to avoid seeing them in the hands of his comrades. It is by studying the child's moral inclinations, chiefly, that one finds how mistaken La Bruyère was when he said: "The character of the child seems unique." It is not merely the unequal progress of reason that makes the difference in characters. The contrast is in nature. No child is absolutely like other children. A child does not resemble himself, from hour to hour. Fourier recognised clearly this diversity of characters when he divided nurslings into three classes—"the benignant, the malignant, and little imps." He was, more-

over, so convinced of the reality of bad instincts belonging to the malignant and the impish, that he did not think of doubting them; he simply set his wits to work to utilize these two classes of children in phalanstery, in employing them for functions agreeing with their tastes; for instance, in destroying reptiles.

If in most cases, even in normal conditions of nature, we find a common germ of native wickedness, we find also, from certain inheritances, dispositions more determinedly evil. Caligula saw his little daughter killing flies. "She resembles me," he said, smiling. It will always be difficult, moreover, when it is a question of these particularly bad natures—mutinous, imperious, scoffing, angry, and cruel natures—to separate what is owing to heredity and what is the result of education.*

In some mysterious way, bad parents bequeath their own faults to their children; what is much more certain still, is that they bring them up badly—that is, from the cradle they have given them the example of the very vices that they have transmitted to them, so that precocious immorality may pass as well for an imitation as for an hereditary influence. The only cases in which the action of heredity is really indisputable are those—too numerous, alas!—in which it shows a morbid pathological character, in which a perversity of birth

* Dr. Sikorski has very justly observed that children, even in the beginning of their existence, differ notably as regards their sensibility. "While some," he says, "are enduring, patient, good-natured, others, on the contrary, are impatient, irritable, whining, and so on."

results from vices of organization, from a degeneracy of race which has its source in the physical and the moral miseries of parents, and which shows itself by the instinct of theft and of murder, by the incendiary mania, by the madness of suicide. People often hold to the supposition that there are "born thieves," "born assassins," that certain children present from their birth all the characteristics of the criminal type. Without wishing to begin a question so delicate, an examination of which would detain us too long, we shall not hesitate to say that psychologists of the school of Lombroso, who consider the criminal as a special human variety, as an hereditary product, seem to us to exaggerate the influences and the action of heredity. Criminal children become what they are under the influence of education, or rather of non-education, and are, as they have been called, "sociological products." The family, surroundings, circumstances—these are the real origins of crime. Joseph Lepage, a young assassin, of whom a great deal was said a few years ago, said: "If my mother had lived, I should not have done as I did."*

V

We hasten to turn the page, and to the picture of the child's faults, we oppose that of his good qualities. If we could not detect in the childish consciousness the abstract notion of duty, if we found nothing to constitute morality, properly so-

* See a recent book on this subject, *Les enfants en prison*, by Tomel and Rollet, Paris, Plon, 1892.

called, at least we may find there the natural feelings that precede duties and prepare for virtues. Almost always, by the side of bad inclinations, there grow good ones, which will correct and stifle the first, however little education may aid Nature. "In the child's heart," says a disciple of Pestalozzi, "good and bad instincts are already awakened and are struggling for the direction of his life. Those that will find most occasion to be exercised will have also the most rapid development, the greatest power, and will dominate the child's character." *

It is not rare to see miserly children who grasp penny after penny, who guard with a jealous care all that they consider as their own especial property. On the other hand, the liberality, the generosity of some children is a known fact. "Petroea"—one of the little girls of whom the pleasing Swedish writer, Frederika Bremer, has given us a picture—"Petroea is good; giving is her life." Moreover, it costs the child a greater effort to divide his cake, to give up his toys, than to give alms with the money of which he does not as yet know the value. Perhaps he will give more willingly to those from whom he expects a just return; to his mother, for instance, who receives with one hand only to return with the other. He sometimes offers with the hope that he will be refused, and a La Rochefoucauld of childhood has imagined the little scene following, which is often repeated in reality.

"Do you want some of my cake, Louise?"

* De Guimps, *Le livre des mères*, p. 28.

"No, little one, keep it yourself. You hear, mamma, how good she is!" answered the older sister.

Aline was delighted and said to herself, "It is a pleasure to offer when people do not accept." And going to her younger sister, she says, "And you, tell me, do you want some of my cake, Odette?"

"If you want to give it to me."

But then, drawing back her cake, our generous child says: "Ah, I know you! Fie! that is not pretty! Louise, you see, refuses!"*

It is nevertheless true that a certain taste for well-doing, which is only an active sympathy, ought to be counted in the number of instincts common in children, as well as sympathy itself, of which they so early give many charming proofs.

This sympathy they extend to everything: to inanimate objects, to animals, as well as to people. Edgar Quinet remembers that when about three years old he played with a frightful clown doll in a silver-lace box-coat, which he valued a hundred times above all that Paris offered to his eyes.† Who could dispute the treasures of tenderness that the hearts of children hold in reserve, after seeing them caress their doll or grieve for a lost sparrow? And let no one say that this sensibility is always superficial, only skin-deep! In their first disappointments in regard to their affections, children

* Louis Ratisbonne, *Les petits hommes*. Compare the saying of the child who said to his sister, speaking of his lamb: "I should like to give it to you, but you know I cannot; it is mine."

† Edgar Quinet, *Histoire de mes idées*, p. 21.

are often inconsolable. "My first sorrow," writes Quinet, "dates from my second year. My nurse Catherine became engaged. I adored her. My cries, my despair, could not keep her, nor even obtain a delay. She married and left me. I almost died. Days, months, passed and my desolation only increased."*

Examples of these particular attachments, of these exclusive affections, are frequent in children. No less so is diffuse, almost commonplace sympathy for all those whom daily intercourse has rendered familiar to them. Pierre Loti says: "They tell me that when I was very small I would never let any member of the family go out of the house, even for the shortest trip or visit, without my being assured that he would return. 'You will come back?' was the question I was accustomed to ask anxiously, after having followed to the door those who were going away."† There was in this case a touching cry of distress to those going away, from whom the child did not wish to be separated forever.

The childish sensibility, however, sometimes goes beyond the circle of the family. It bursts out unexpectedly, in the presence of suffering, of supposed or real dangers, to which even a stranger is exposed. A Russian writer, Mme. Manacéine, the author of a remarkable work on Mental Overtaxing, recounts the following fact, which she witnessed in the zoological gardens at St. Petersburg: "A great many people were quietly watching differ-

* Edgar Quinet, *op. cit.*, p. 19.

† Pierre Loti, *Le Roman d'un enfant*, 1890, p. 8.

ent tricks performed by an elephant, and especially one in which the keeper lay down on the ground, and the elephant began to walk over him. There was a little girl, two years old, seated on her nurse's arm, who began to cry bitterly and protested, by her gestures and her baby talk, against the elephant's walking over the man's body. They tried to quiet her, but, in spite of the keeper's reassuring words, in spite of the nurse, who felt herself positively disgraced by such indecent conduct, the child would not be appeased until the keeper stood up and made the elephant ring the bell."*

It is not forcing matters at all to see in this fright, in the emotion of the little two-year-old girl, the awakening of the broadest feeling of the joint responsibility of the human race. Doubtless people will say that at this unaccustomed sight the surprised child was afraid. But is not fear for others the foundation of love?

We shall not insist here on the other forms, on the usual forms of childish sympathy—filial love, fraternal love. Not to be sceptical on this point, it is enough to see the child when he is looking at his mother or his sister with a face smiling and gracious, full of confidence, of trust, and of tenderness.

A less natural inclination, but one of which it is not impossible to perceive the first signs from a

* Mme. Manacéine, *Le Surmenage mental*, p. 248, Paris, Masson, 1890.—Galton, the English philosopher, speaks of the feeling that children show in the Zoological Gardens of London when the serpents are being given living animals to eat, and that while adults remain impassive.

very tender age, is the feeling of justice.* I have always been struck by the energy that one of my sons showed in soliciting for himself the treatment that was accorded to his brother—the treatment of the most favoured brother—if it was a question of an agreeable thing: of the distribution of dainties, for instance; and, on the contrary, in demanding for his brother an equal part in the painful obligations that were imposed on himself. See children at play. “Each one in his turn” is one of the points most insisted on. We remember with what intense indignation Rousseau, as a child, protested against the injustice of which he believed himself to be the victim. “The mother,” says Michelet, “never teaches justice, but she appeals to the sense of justice that is in the child by nature.” Is it surprising that the child feels this sense of justice at first as related to himself, that he conceives at first the equality of blessings only for himself, the equality of what is bad for others? It is only by reflection that he can fill up the gaps of his natural impulses and complete the mutilated feeling which he has the merit at least of feeling with force.

Even purely moral feelings like remorse and repentance can be developed in the child's soul towards the age of six or seven. Edgar Quinet had come to his seventh year—to the age when sins count, as the child said. His mother had gravely warned him of the importance of this date, after which he should be responsible for his actions. The result was for several days a redoubled obedi-

* Michelet goes so far as to say: “Justice is an innate feeling.”

ence and irreproachable conduct; but nobody is perfect, above all at seven years! A grave fault was committed. The culprit aggravated it by his spite at having committed it, and broke out in open revolt. But remorse followed soon—and what remorse! “It was despair without bounds, which no one could appease. I wandered around the entire day on the outer balcony; when the peasants who were passing drew near, I cried out in a lamentable voice, as I tore my hair, ‘I am damned, I am damned!’” Doubtless this cry of a conscience awake for the first time will not be found, uttered with the same desolate conviction, by the lips of all children. There may be nothing that approaches or resembles it in the multitude of little boys at school. But we ought not to study human nature in the most graceless specimens; on the contrary, if we wish to arrive at a just appreciation, we should seek the exact measure of what humanity can do in individuals who, thanks to favourable surroundings, have grown up in normal conditions; remembering, moreover, that the child’s good qualities are often only the reflection of his parents’ virtues, and that the childish character is, so to speak, a piece written in collaboration, in which it is hard to separate the work of the two collaborators, nature and education.

CHAPTER VII

MORBID TENDENCIES

I. The child does not escape insanity.—Cases of insanity are, however, rare in early childhood.—Esquirol's opinion.—More recent observations.—Insanity in the child under three.—The child may be born mad.—The influence of heredity.—Conditions of childish nature that protect it against insanity; opposite conditions.—Intellectual insanity and moral insanity. II. Insanity of the muscular activity.—Convulsions, from certain points of view, are a mental disease.—Insanity in animals.—Hallucinations, or the insanity of external perception.—Physical and mental causes of hallucination.—The rôle of imagination in hallucination.—Rare in children, hallucination is more-over difficult to observe.—Hallucination in animals.—Examples of hallucination in children.—Nightmare. III. General insanity.—It does not except the child.—Mania and the delirium of ideas.—Example of quiet mania in a little girl of four.—Example of raving mania.—Monomania not found in children.—Possible that the child may recover from mania.—Cataleptic insanity.—Moral insanity more frequent than intellectual insanity.—Character perverted by disease.—Suicidal insanity. IV. The insanity of the child, a miniature of the insanity of the adult.—In the child we find the elements of insanity rather than general and complete insanity.—Ætiology of the child's insanity.—Predominance of physical causes.—Diseases, lesions of the brain.—Fright.—Hereditary causes.—Insanity transmissible from ancestors to descendants.

I

It is a very general opinion, and in any case a very natural one, that the child, because of his age,

is not liable to madness. How could we resign ourselves to believing that Nature gives itself up to this cruel game of deforming intelligences that she has hardly formed; of disorganizing immediately what she is only beginning to organize; finally, of throwing into the disorders of mental derangement beings that she has only just called to life? To be born to become mad: what an anomaly! What apparent contradiction with the laws of Nature! Should not the child escape madness because of the energy of a force that is not worn and tired by the contact of human things, because of the vigour of his faculties still intact? The author of a recent book on this subject* expresses himself in the same way: "Madness in children? Do we not feel a deep sadness on reading these words? Is it then possible that this joyous age, careless of the past and of the future, living only for the present, ignorant as yet of the sorrows of life, should be struck with the most horrible scourge that can afflict a thinking being?"

Facts do not permit us to indulge this pleasant illusion. Children do not escape insanity any more than they escape sickness or idiocy. Doubtless insanity is relatively less frequent in the first years, and even in the whole period of youth. It is between twenty and thirty years that statistics begin to show frequent cases of insanity. From thirty to forty years there are many—"il y a foule," as Dr. Guislain says. At the age when the facul-

* *La folie chez les enfants*, by Dr. Paul Moreau (of Tours). Paris, J.-B. Baillière, 1888.

ties have lost the vigorous freshness of the first years, in which the passions are violent, or ardent, when man finds himself most absorbed by the struggles of life, it is natural that the chances of madness should reach the maximum. After forty, the proportion diminishes again; a man is less apt to contract mental affections, because, having already proved his strength in the crises of life, he is strengthened and settled in his reason as he is also in his disposition and in his health. Old age, alone, with the general weakening of the faculties, will raise the number of cases again, dementia belonging to old age. No epoch of life is absolutely exempt from mental alienation. The only privilege of certain ages, as childhood, is that insanity is more rare then. The child—whom we would like to study only in the normal development of his intelligence and of his sensibility, whom we would rather paint only in the pure, graceful unfolding of his nature—the child, in spite of the favourable conditions that protect him, is not exempt from the common law, and he has a title to a special chapter in any comparatively complete treatment of mental pathology.*

Esquirol seemed to be of the opposite opinion when he wrote, "The child is exempt from madness"; but he immediately corrected this too absolute rule by adding, "unless the child has some defects of form at birth, or unless convulsions throw him into imbecility or idiocy." † We add to this that

* In Dr. Moreau's book, already cited, will be found a collection of facts on this subject. (Pp. 13-16.)

† Esquirol, *Des maladies mentales*, vol. i, p. 15.

the list of exceptions admitted by Esquirol is insufficient and incomplete. All cases of madness in children, even those that Esquirol cites, cannot be placed in the too narrow categories of madness caused by a defect of form or by a convulsive fit. Moral causes of insanity can affect even the child; witness, for instance, the little maniac cared for by Esquirol himself, who, up to the age of eight years, had shown nothing unusual in his faculties, but who, after the siege of Paris in 1814, being frightened and worried by all that he saw, fell suddenly into most pronounced intellectual disorder.

Since Esquirol wrote, many facts have been collected which extend our knowledge of the subject and render some general inductions possible. One will find, for example, a long and interesting list of observations in Dr. Berckam's articles (1864).^{*} Other cases have been given at different times in the *Medico-psychological Annals*.[†] Moreover, the majority of the authorities on derangement no longer hesitate to recognise the possibility of madness in children. Maudsley, in his *Pathology of Mind*, has set this new aspect of mental diseases in relief by devoting to it an interesting chapter entitled *The Insanity of Early Life*.

It seems, however, that observers still dislike to

^{*} See the German periodical, *Correspondenz Blatt*, 1864.

[†] Notice especially the following volumes of the *Annals*: 1849, p. 72; 1855, p. 60; *ibid.*, p. 527; 1857, p. 218; 1861, p. 305; 1867, p. 326 *et seq.*; 1870, p. 260 *et seq.* See also in the *Journal de médecine psychologique*, 1858, the article by Brierre de Boismont, *Recherches sur aliénation mentale des enfants et particulièrement des jeunes gens*.

admit the existence of insanity in the very young child. Towards the eighth or the tenth year facts are too numerous and too characteristic for it to be possible to deny them. Dr. Morel says: "There is not a specialist on insanity that cannot cite veritable intellectual alienations in children from six to fifteen years old."* Six years, then, would be the lowest limit at which the child could become mad. Facts contradict this opinion, too, and prove that the age of madness should be placed as early as the first beginnings of life. Esquirol recalls the observations made by Dr. Franck of a maniac twenty-four months old.† Haslam speaks of a little girl that became deranged when about three years old and of a boy two years old that was afflicted with insanity without any known cause.‡

Stoll tells the story of a child that became insane as the result of vaccination.* We shall have occasion to report analogous examples of madness coming as early as it did in these cases. The alienation of the intelligence, then, can immediately follow and even accompany its first awakening. It is not enough to say that the child can become insane; the truth is that sometimes he is born insane.

Nothing is more intelligible, moreover, *a priori*, even supposing that it could not be demonstrated by experience, than the possibility of madness in children. It is enough to consider the fact

* Morel, *Traité des maladies mentales*, p. 100.

† Esquirol, *op. cit.*

‡ Haslam, *Observations on Madness*, London, 1809.

* See *Annales médico-psychologiques*, 1867, i, p. 329.

that the new-born child is not an entirely new being. He has a past—that of his family and of his race. He is heir to a large estate of dispositions, of aptitudes, of good and of bad qualities—a patrimony prepared for him by the actions of his ancestors.

His individual nature reaches, by deep and hidden roots, into the common nature of the family to which he belongs. There may be innate madness, then, as there is innate reason. The child may come into the world with morbid predispositions, moral as well as physical. Doubtless most often the unhealthy germs of the soul will not develop immediately; they will cover long years, they will remain in a latent state until they break out under the action of circumstances. Sometimes the predisposition transmitted to the new individual comes forth only on a given day, on a date in some way fixed in advance. A man marries, becomes mad at a certain time; his son, born before this time, will have a fit of madness that will come on the same date as his father's. But hereditary madness does not always know these reprieves and these delays. It sometimes bursts forth from the first day, particularly when the derangement of parents has been coexistent with the act of generation or of childbirth. Crichton, according to Greeding, reports a very striking example: "A woman about forty years old, really insane, but otherwise in good health, gave birth, on the 20th of January, 1763, to a male child who was immediately raving mad. When he was brought to our asylum, January 24th, he had such strength in his

legs and his arms that four women could hardly hold him. These fits ended in inexplicable bursts of laughter; or the child, in a fit of anger, broke and tore everything within reach—his clothes, his coverings, his bed. We did not dare leave him alone, lest he should have climbed on to the benches or the tables, or even tried to crawl out into the streets. A little while afterward, when his teeth began to come, the child died.”* Here madness had been transmitted by the mother to the child, by a sort of direct communication, from hand to hand, so to speak. The derangement of the mother was continued without interruption and with analogous characteristics in the crazy movements of the son.

Morbid heredity, then, does not act solely at a distance, and as by a shot at long range; its action may be immediate and instantaneous. What usually retards the explosion of evil are the particular conditions of the moral life of the child. The very weakness of the childish intelligence is a guarantee, a protection, against madness. The first condition for a cause of destruction to act is that there be something to destroy. When there is nothing, as they say, the king loses his rights.

On other sides, however, the child's nature offers an easy prey to the invasion of madness. In the midst of so many pathological variations, there are two very characteristic, very distinct forms of mental derangement—intellectual insanity and moral insanity, the former consisting essentially in the disorder of ideas and absurdities of belief, the

* See Maudsley, *op. cit.*, p. 258.

latter in the morbidness of desires and the perversity of actions. What really constitutes the first is the absence of intermediary ideas, which in the normal state interpose, so to speak, between ideas and convictions—which prevent the foolish idea from getting the upper hand and installing itself in the mind—which at least dislodge it—which finally correct the illusions and the hallucinations of the senses. So, what characterizes moral insanity is the absence of will—that is to say, of the moderating power which, in the sane man, places itself between the impulse and the act, and stops the agent at the moment when he is about to obey the impulse of instinct or of blind desire. So the child, by the poverty of his remembrances and the slenderness of his intelligence, and by the inertness of his will, finds himself, from these two points of view, in a situation most favourable to the development of madness. If insane ideas once penetrate his consciousness, they meet no obstacle there; his memory is too weak, too inexperienced to resist the false conceptions that hallucination suggests. So morbid impulses transmitted by heredity, which perhaps the adult will succeed in overcoming, are irresistible to the child; his vacillating will opposes no barrier to bad instincts. When madness threatens a grown man, it must first triumph over a tried intelligence, long settled in its beliefs, so that even hallucination may coexist with reason; besides, it must conquer the energy of will that age has strengthened, before which, at each instant, the irreflective suggestions of passion, the absurd capricious desires that move even the sanest mind, must

stop. But when madness unfortunately falls upon the child, it is immediately mistress of the place; for it is in an open country without defence, where it can safely carry on its ravages.

We cannot doubt, then, the possibility of madness in children; but this general truth once established, we must go into details, seek under what forms the phenomena of mental derangement present themselves in souls badly balanced and only in process of formation; we must follow, finally, the parallel evolution of the faculties and of the diseases that attack them.

II

It is by muscular activity that the life of the child first shows itself. In the first days of his existence, the child, as we have said, may be defined as a moving being. His movements are spontaneous, automatic, or reflex, caused by internal energy called forth by excitations from without. Will does not govern them yet, but in this almost unconscious mobility of the child, when no morbid influence is at work, there is a natural order, sometimes an involuntary and unsought-for grace. Let sickness come, and, in place of these regular rhythmic movements, there will appear a mobility absolutely without order, fits of terrible agitation, and finally that curse of childhood called convulsions.

Convulsions ought not to be considered as a simple physical malady; they are, in certain ways, a real mental malady. The proof of this is the action that they often exercise on the future develop-

ment of intelligence; not only do they leave corporeal infirmities in the child that they have attacked violently; they are not content with dislocating limbs, with disfiguring the face; they also sometimes reach the intelligence, they make the little patient an idiot for life. "We often see idiocy follow the convulsions of first childhood."* The proof of this is found in the mental troubles that accompany them when they occur in older children: the complete loss of knowledge, a sort of stupor, is their immediate effect. Moreover, in themselves, since they are an irregularity of the muscular activity, convulsions come under the domain of psychology. We might say that they are a delirium of the muscles, just as delirium properly so-called is, as it were, a convulsion of the mind.

At the age when the intelligence is not yet awakened, convulsions are the only form of madness possible. While in the adult they are complicated by all the disorders of mental alienation, by derangement of all the faculties, in the child they are produced, so to speak, in a state of isolation. The morbid situation that they betray can extend only to the faculty that is developed—the faculty of motion. Notice, moreover, that convulsions represent the outward appearance—the mask, as it were—of insanity. Nothing more resembles a maniac twisting about in mad agitation, a struggling pythoress, one possessed by the devil and being dragged now this way, now that, than the little child undergoing the strain of a convulsive fit. In animals, also,

* Trousseau, *Clinique médicale*, 1868, vol. ii, p. 181.

mental affections show themselves by convulsions or by symptoms much like them. The fishermen of the Volga know a kind of fish that they regard as susceptible to madness, because they swim about impetuously in a circle. The elephant, usually so calm and mild, is sometimes seized by a sort of frenzy that plunges him into a furious agitation; he throws himself violently on all that he meets—men, animals, things—and destroys everything in his reach. In these two cases—in the elephant become destructive, as in the child a prey to convulsions—the principle of the disorder is the same. A morbid cause has suppressed the natural bond that subordinates the individual's movements to the normal needs of his organs or to the impressions received from without—a morbid cause has turned the muscular activity loose and given up to a sort of epileptic fury all the motor elements of the organism.

If we consider the nature of the causes that produce convulsions in the child, we shall be more disposed to admit the mental character of this pathological fact. But the convulsive fit sometimes results from an accident. Trousseau cites a very curious example of this. A physician, called in for a little child, chanced to take off the patient's bonnet; he saw a bit of thread on the child's head, and on trying to remove it, he drew out a long needle deeply embedded in the brain. The needle once out, the convulsions ceased immediately.* Most often, however, convulsions come from inward causes, from cerebral affections transmitted by heredity. They

* Trousseau, *op. cit.*, p. 166.

are produced in individuals endowed with a particular nervous susceptibility, which passes with life from ancestor to descendant, and which shows itself sometimes by one phenomenon, sometimes by another—by a fit of convulsions in the child, by epilepsy or hysteria in the adult. “Look carefully into the matter, and perhaps you will not find a single family of insane people in which epileptic convulsions in childhood have not played a certain part. Even in families that are simply nervous, including no really insane people in their ranks as yet, the appearance of the epilepsy of childhood, showing itself in several children successively, ought to be considered as a symptom of bad augury.”* It is the first signal of the possible invasion of madness in a family hitherto sane.

Convulsions, then, may be considered as the first step of madness in the child; hallucination is the second. The new-born child does not take long to become something more than a little moving being. He very soon shows himself a sensible being, capable of perception and of sensation. He sees, he hears, he touches. Intelligence opens to the representations of the outer world. Each day a piece of material reality is detached, under the form of perception, from the ensemble of things, and penetrates the child's brain. At the same time the sensibility is aroused, and a multitude of little pleasures and of little pains, like the waves that ripple

* See *Annales médico-psychologiques*, 1879, i, p. 55. Article by Dr. H. Martin on Alcoholism of Parents considered as a Cause of Epilepsy in their Descendants.

the surface of the lake, come to disturb the superficial parts of the nervous system. Memory takes possession of these acquisitions of the senses, and remembrances form. The idea, or at least the image, fixes itself in the mind. As a result of this, from the first months of childhood there is a possibility of dreams and of hallucinations.

Hallucination is a complex phenomenon, all the forms of which we need not here describe. It is hardly possible to-day to doubt that the false perceptions which form it result at once from a lesion, from an alteration, from a disorder of some sort that attacks the organs of the senses, and from a deeper perturbation that affects the nervous centres and consequently the memory and the imagination. We can accept neither the extreme opinion of Esquirol, of Leuret, of Lélut, for whom hallucination is only an idea made objective, and consequently a purely mental perturbation; nor the contrary hypothesis of Luys, who sees in hallucination only a purely physiological fact, only a lesion localized in the sense organs and the nervous ganglions. Doubtless the participation of the sense organ in the illusions of one suffering from hallucination is shown by facts, notably by those that specialists call "divided hallucinations." The patient sees with his left eye an appearance that is not visible to the right eye. So, in the case of the displacement of the image that flits from one point to another, when one moves the eyeball. So, still, in the case of the precise observation establishing the fact that hallucinations sometimes accompany diseases of the eye—ulceration of the cornea, for instance.

The participation of the intelligence is no less certain. One suffering from a hallucination of sight will see celestial lights or infernal flames, according to whether he is religious or not. Habits of character, familiar thoughts, inveterate feelings, give a special character to each hallucination, according to the individuals. Inhabitants of cities have more complicated hallucinations than do peasants. In a word, the imagination furnishes the materials for hallucination. It is even probable that it is most often the point of departure and the cause. Imagination excited, exalted, troubles the senses in their turn, and causes there illusory representations. Normal conditions are then destroyed and, as it were, reversed. Indeed, while a perception is a sensation that has become an idea, hallucination is an idea that has become a sensation.

Imagination is still too little developed in the child for us to expect to meet hallucinatory phenomena very frequently. Moreover, in these little heads, hardly inhabited by their few remembrances, there can be only short hallucinations; nothing that resembles the complicated illusions which make a picture, and which show the variety of their conceptions in the mind of the mature man, weighed down with ideas and overladen with passions. When the mind has grown, when the memory has been enriched, the illusion may draw unstintingly from the vast store of ideas. In the child, all is foreshortened—the troubles and the disorders, no less than the normal and regular operations of thought.

On the other hand, it is evident that in the little child not yet able to speak, even if a hallucination is produced, it easily escapes the control of the observer. Rare in themselves, facts of this kind are still more rarely observable. We should not be astonished, then, that the material on this point is so scarce. Still, if our data were even fewer than they are, analogy would give us the right to affirm *a priori* the possibility of childish hallucination. It is a fact that the child dreams; the little dreamer of two years or even less, often really shouts with laughter at the remembrance of his play and the amusements of the evening before, or cries with pain, as though terrified in his dreams. We see him smile as though at a sight that pleases him. Later he talks, he gesticulates. Whatever Tiedemann may say, these manifestations of the sleeping child cannot be explained merely by the mechanical irritability of the body; they presuppose a slight work of imagination and of memory, of fleeting impressions that cross the brain.

When trying to reason exactly on the child's nature, we should not fear to seek points of comparison in animals. The child, in action if not in power, is surely in many respects what the animal will be all its life. What observation discovers in one, may probably be attributed to the other. But the animal sometimes presents real insanity, and hallucinatory phenomena, and this illustrates our thesis further. Recent experiments establish the fact that the dog, for instance, which we knew could dream, could bark in his dreams, may also be the victim of hallucination. Dr. Magnan, by

injecting alcohol into the veins of a healthy dog, saw savage fits of fury break out; the dog raised himself, barked furiously, and seemed to be struggling with imaginary dogs; after which he quieted down, still growling once or twice in the direction of his supposed enemy.*

It has happened that imprudence, or accident, has caused analogous disorders in children, furnishing the direct proof of the existence of hallucination in children. The absorption of poisonous substances has been enough to throw a baby of fourteen months and a half into a singular state, verging on insanity, in which hallucination played its part. The case has been given by Dr. Thoré in the *Annales médico-psychologiques*.† A little girl, fifteen months old, in the absence of her mother, had swallowed several grains of *Datura stramonium*. Almost immediately the child went into a state of agitation that frightened the parents greatly. The physician called in made the following observations: "A great change had taken place in vision; the child seemed deprived of sight; she did not look at any of the objects that surrounded her, and paid no attention to those that pleased her and that she usually wanted. They showed her a watch and her ordinary toys, but they did not attract her attention; on the contrary, she seemed to be pursuing imaginary objects, placed

* See Archives de physiologie normale et pathologique, March and May, 1873.

† The article is entitled Un mot sur les hallucinations dans la première enfance. (Vol. i of the Annales, 1859, pp. 72-79.)

at a certain distance from her, which she tried to reach by holding out her arms, and to grasp with her hand. She even raised herself up, resting on the sides of her cradle, as if to reach them more easily. She moved her hands in space, as if seeking objects that fled from her."

In this case there is evidently something more than disordered convulsions. The child showed very plainly by her repeated movements in the same direction that she was the sport of an imaginary vision; being possessed by subjective images, her eyes no longer saw real objects.

In this case, as is natural in a very little child, the hallucination is the result of an accidental and external cause, a sort of transient poisoning.* But if we examine children more advanced in age, above all children particularly endowed with imagination and destined by their nervous nature to become artists or poets, we shall meet with hallucination of another order, suggested by the very vivacity of their minds, by a superexcitation of their faculties. Such, for instance, is the case of Hartley Coleridge.† When a little child, he imagined that

* Hallucination in children is sometimes caused by physical disease. "A little girl under my charge had a fever. She awoke very suddenly one morning, uttering horrible cries; she pointed anxiously to one corner of the room where she saw great black figures, a devil that threatened her by gesture and by word. In the evening she had another hallucination of sight. She thought great sheets of water were falling from the ceiling." (*Annales médico-psychologiques*, 1849, p. 77.)

† See in *The Journal of Mental Science*, April, 1860, an article by J. Crichton Browne, On the Psychological Maladies of Childhood.

he saw a small cataract near his father's house. To this cataract there was soon added an island, to which he gave a name. Little by little this world that his fancy had created became for him a real world, in which he journeyed every day. When people humoured his fancy by asking him how he communicated with this enchanted island, he drew his inspiration from a tale in the Arabian Nights and answered, "I go there and return on the wings of a great bird." If we believe the witnesses of this psychological fact, Coleridge was really convinced of the reality of his vision. His poetic dream had taken shape, and the child's imagination, heightened by precocious reading, was its own dupe. Who can say whether in the case of visionary dreamers the visions of ripe age have not been prepared for in the same way from the first years of life by little trifling hallucinations which have insensibly accustomed them to live in fancy?

It has been often said, in these last years, that the study of abnormal and morbid facts will shed new light on the nature of the sane and natural mind. Psychologists cannot fail to profit by the large number of asylums and by the works of specialists on the subject of insanity. But the opposite is not less true: the most ordinary facts of life sometimes throw a great deal of light on the peculiarities of insanity. There is a deep-seated relation between morbid psychology and normal psychology; and if the science of mental alienation, in spite of the great advance of this century, has not succeeded in clearing up what Esquirol calls "the chaos of human miseries," it is perhaps be-

cause it is still waiting for psychology to furnish an exact description of the moral faculties—above all, a precise analysis of their natural development.

In the particular case that occupies us, it is certain that the commonest facts of childish life can help us to understand how the irregular state of hallucination is produced. There is nothing more active, more alive, than the work of imagination, even in the first years. Precisely because reflection brings no corrective, and because it is not hampered as it will be later by an abundance of ideas, the childish imagination represents things to itself with an unheard-of vivacity. Take a child into a shop, into an apartment that he has never seen; his eyes, ferreting out all the corners, will soon have seen every object, and, even after a rapid inspection, his memory will keep a faithful and precise remembrance of the most insignificant details. Is it astonishing that a being endowed with such prompt imagination should easily confuse his conceptions and his perceptions, images and reality?

Nightmare, which is, as it were, a hallucination of the sleeping man, has been frequently observed in children, and these "illusions of sleep" continue during the night. Dr. Thoré says: "At the moment when children awake, even after their eyes are wide open, they see distinctly traced on the wall near them more or less terrifying objects, which they describe as well as their intelligence will permit." Sometimes, on the contrary, the awakening entirely effaces the impressions of the night. Maudsley says: "The child begins to cry when sound asleep; his eyes are open, his limbs

shake with fear; he does not recognise his parents or the friends that try to calm him. But in the morning he no longer remembers the fright that he has felt."*

It will be noticed that hallucinations of sight are most frequent in children. It is because the new-born child is all eyes before he is all ears. Dr. Berckham, however, reports the observation of a child three years old affected by a hallucination of hearing.†

Under whatever form it may present itself, and whatever sense may be affected, hallucination is only an element of insanity, a partial insanity. In the child, as in the adult man, the alienation of the outer perception may be coexistent with the general health of the other faculties and be followed by no other delirious symptom. It remains for us to show that general manias, in which hallucination may be mingled but which it does not constitute, which affect the mind and include the gravest disorders, are not spared to childhood.

III

Mania—that is to say, the incoherence and the delirium of ideas, furious agitation or wandering of the thought—seems to be the most usual form of intellectual madness in children. On this point the majority of observers agree. Dr. Delasiauve,‡ Dr. Le Paulmier, in his thesis entitled *Mental Affec-*

* Maudsley, *op. cit.*, p. 203.

† See *Annales médico-psychologiques*, 1867, i, p. 327.

‡ *Ibid.*, 1855, i, p. 527. *Special Form of Mania in Children.*

tions in Children and Mania in Particular,* and Dr. Morel† declare that insanity shows itself in children most often by mania.

Here are the most remarkable cases collected by specialists. We shall cite first the very complete observation of Dr. Chatelain, who has had occasion himself to study a child four years and a few months old, the daughter of a farmer in the Jura. Two causes—the one physical, measles, the other moral, a keen fright caused by the sight of a fire-engine—had acted on the child's weak constitution, and had brought about the strange state from which she suffered. Dr. Chatelain says: "Louise is queer, distracted; she answers at random the questions that are asked her. One day her father told her to bring her doll to him. She went to get it, but brought nothing, and said, 'Here it is'; her hands and her arms made a gesture as though she were giving something, but her hand was empty. After she became ill her character changed perceptibly; she completely lost the timidity natural to her age. In the presence of two strange physicians, who examined her, she felt no fear, even no restraint. If a question was asked her, she answered quickly, without hesitation, but she answered wrongly." The observer goes on to report an entire conversation, showing a complete disorder of ideas in a child otherwise intelligent, whose malady could not be confounded with idiocy.

The preceding is an example of calm, quiet ma-

* Le Paulmier's thesis dates from 1856.

† See *Annales médico-psychologiques*, 1870, ii, pp. 260-269.

nia. However, the little girl in question had also fits of raving mania, shown by incessant movement, by tears, by cries, and by threats against the life of her parents. In other cases, agitation is the permanent characteristic of the child's mania. Griesinger says: "We see in children of three or four years fits of crying, with a longing to strike, to bite, and to destroy whatever falls into their hands."*

In children a little older, cases of mania become still more frequent. Dr. Morel cites the instance of a child of five who, after having been frightened, fell into a state of "continued turbulence and exacerbation."† Under the name of "raving monopathy," Dr. Guislain calls attention to a malady of the same kind in a little girl of seven years; in this case the cause of the trouble was a blow received on the head.‡ Esquirol speaks of a child eight years old who was afflicted with mania following typhoid fever. And as moral causes always alternate with physical ones in the generation of madness, we find in Foville the case of a boy of ten who became a maniac as the result of having read too much.

It is remarkable that to these numerous examples of childish mania, the list of which might be prolonged, the observer cannot add a single case of monomania. The fixity of mad ideas is as incompatible with the mania of the child as the fixity of

* Griesinger, *Pathologie und Therapie der psychischen Krankheiten*, second edition, p. 147.

† Dr. Morel, *op. cit.*, p. 102.

‡ Dictionnaire de médecine, 1829.

reasonable ideas with his normal state.* The little maniac observed by Dr. Chatelain changed the direction of her thoughts unceasingly. "Ordinarily an idea of some sort absorbed her exclusively during a day or two, then was effaced to give place to another." Monomania seems to be at first a sign of great intellectual weakness, since in it all the ideas, all the feelings, are as it were annihilated before a single thought, which has become ruling mistress of the consciousness. However, if we reflect on it, monomania presupposes a certain force of intelligence, a certain power of concentration, since it is a delirium entirely systematized. The child, with his mobile and inconstant ideas, with his wavering and as yet not firmly established impressions, may easily be delirious—that is, may pass from one idea to another without sequence and without reason; but there does not seem to be in him that morbid aptitude for grouping in a permanent way all of his faculties around a certain insane conception. Doubtless this is why his intellectual disorder shows itself by the rapid and incoherent succession, by the incessant flight of ideas rushing distractedly one after the other, rather than by the obstinate concentration of all the forces of the mind in one direction.

As to the development of mania in the child, it is difficult, in the present state of observations, to describe its history with any precision. The ter-

* The mobility of childhood is such that a determinate order of delirious ideas cannot, at this age, take possession of the mind and become systematized, as is seen at a more advanced time of life." (Griesinger, *Mental Diseases*.)

mination varies: sometimes death follows very soon, sometimes idiocy for life succeeds the delirious attacks, sometimes, and very frequently, recovery reestablishes order and peace in these little souls troubled for an instant. The majority of the little maniacs cared for by Dr. Delasiauve and Dr. Le Paulmier recovered in a somewhat limited space of time.

The most characteristic trait noted in the still incomplete study of the question is the frequent appearance in children affected by mania, of real ecstatic crises, of what Maudsley calls "cataleptoid insanity." Nothing is more conformable to the logic of nature than these periods of remission, so to speak, of the calm sleep of the soul following periods of agitation and violence. For hours, for entire days, the child lies in a sort of mystic contemplation; turbulence and loquacity are replaced by immobility and stupor. The eyes are fixed, the look meditative.* In certain cases, it is probable that hallucination explains the motionless attitude and the attentive pose of the ecstatic child. Dr. Chatelain's little maniac "seemed to see and hear things that did not exist. From time to time she

* See *Annales médico-psychologiques*, 1855, i, p. 527. *Forme maniaque speciale chez les enfants*, by Dr. Delasiauve. Immobility is not the exclusive attitude of these ecstasies. "In some of these maniacs there is a slow rhythmic movement like that of the marionettes. Most of them, not wishing to be distracted from their thoughts, seem insensible to the words that are addressed to them; others answer by vague monosyllables, by gestures, or by an ironical smile that betrays their uncertainty. The crises finally may be broken into by turbulent cries, the evident result of fancied sensations."

turned her ear suddenly as though some one had spoken, and listened attentively for several seconds." In other cases, it is probable that the child, as is the case with all ecstasies, though appearing to think a great deal, really thinks of nothing.

We have the right to expect that science, whose attention is now fully awake to the subject of morbid phenomena, of abnormal states of the child's consciousness, will hereafter determine, with more precision than we can at present, the different forms of mania and the other troubles of the intelligence in the first years of life. What we know in advance, by reason of the laws that preside over the development of the faculties, is that observers will find cases of moral insanity much more often than cases of intellectual insanity, properly so called. We know what the specialists call moral insanity, affective or impulsive, which is sometimes only the outward manifestation of the disorder of the mind, but which, in other circumstances, by a strange division of the faculties, has to bear only on inclinations, on instincts, perverts only the will, and leaves the intelligence intact. It is evident that insanity of this sort is more consonant than any other with the nature of the child. Mania and delirium alter judgment, reasoning; but judgment is acquired, reasoning is acquired. Some time is necessary for the child to learn to reason; consequently, some time is necessary also for him to come to the point of reasoning falsely. But moral insanity affects the inclinations, the instincts, and all that is innate, immediately transmitted by heredity; all that is ready to act from the very first days of life.

Is it surprising, then, that in the youngest children we so often find morbid tendencies, unhealthy impulses, which cause most extravagant actions?

Dr. Renaudin mentions a child of ordinary intelligence whose thought showed no delirium, no incoherence, but who was subject to a real insanity of action and of will. The malady advanced by attacks of irresistible violence, to which always corresponded a complete insensibility of the skin. When questioned as to his bad conduct, the child was silent, or answered that he could not control himself. The violence was such, the observer adds, "that we did not doubt its being able to go to the point of murder." *

Another example of impulsive insanity, leading to homicide, is furnished by Esquirol.† It is the case of a little girl of seven and a half who, having conceived a profound aversion for her stepmother, who had always treated her with kindness, tried several times to kill her, as well as her little brother. Her father threatened to have her put in prison, and she answered, "That will not prevent my mother and my brother from dying, and me from killing them." When submitted to a sort of cross-examination, these were some of her answers:

Question. Why do you want to kill your mother?

Answer. Because I do not love her.

Q. Why do you not love her? A. I do not know.

Q. Has she maltreated you? A. No.

Q. You have a little brother? A. Yes.

* Maudsley, *op. cit.*, p. 287.

† Esquirol, *op. cit.*, p. 386 *et seq.*

Q. He is out at nurse, and you have never seen him? A. Yes.

Q. Do you like him? A. No.

Q. Would you like to have him die? A. Yes.

Q. Do you want to kill him? A. Yes. I have asked papa to bring him home from the nurse so that I may kill him.

Doubtless in this last example we have to do with criminal will rather than with real insanity. Still, the child's obstinacy, her cold-blooded cynical attitude, the absence even of motives sufficient to explain her fixed idea of murder, all authorize us to consider her perversity as a case of mental pathology.

Dr. Prichard, who, as all know, first clearly distinguished the characteristics of moral insanity, cites the following: "A little girl of seven years had been, up to this age, gentle, gay, affectionate, very intelligent, when she was one day sent home by her teacher because of a marked change that had taken place in her conduct. She had become rough, rude, and ungovernable. Her appetite was perverted to the point of her preferring raw vegetables to her usual diet. Her health changed. Only her intellectual faculties escaped. The child recovered at the end of two months." * This example is especially interesting because it shows us moral insanity suddenly invading a character hitherto well regulated, an intelligence already awakened, and advancing by passing attacks, as do the majority of physical or mental maladies.

* Prichard, On Insanity, 1835, p. 55.

It would take too long to reproduce here all the cases of character vitiated by disease that have been recorded of childhood.*

Though we do not consider all tricky children crazy, though we do not impute to insanity all the oddities of the sensibility, still we do not hesitate to say—and the art of education ought to profit by this fact—that the eccentricities of children often have a morbid cause. J. Crichton Browne has collected cases of kleptomania, of dipsomania, of pantophobia, in very young children.† Wickedness often acquires such proportions in these weak natures that it ought to be considered as a malady rather than as a vice. Browne tells the story of a young English nobleman who was possessed of such instincts of cruelty that, in order to occupy him, his father had to send him to the country and give him the duties of butcher among his farmers. His greatest pleasure was to kill fowls and hares by torturing them. When the workmen put up scaffoldings to work on their buildings, the

* We cite the following observations, which belong to the same category. First, a little girl eight years old, whose affectionate feelings had undergone a complete perversion; she was often heard to say that she would kill her grandmother in order to get her clothes. Gradually she recovered, and there remained no trace of her old state, beyond a tendency to sadness. (See *Annales médico-psychologiques*, 1867, i, p. 331.) Second, a boy of six, observed by John Mislar (see *The Lancet*, May 23, 1863), who avoided the caresses of his parents, and responded to them only by fits of violence. His sister died, and he set fire to the cradle in which rested the body of the dead child. His sense of taste was completely depraved, and seemed satisfied by salt and by fish-bones.

† See *The Journal of Mental Science*, April, 1860.

child tried in every way possible to make them fall.*

We should like to believe, at the very outset, that the suicide mania finds no victims among children. The idea of voluntary death and the character of childhood seem incompatible. How is it possible that a being hardly created should want to destroy itself, to disown itself; that the instinct of preservation should not come out victorious from the crises to which the childish sensibility is submitted? Still, statistics prove that the suicide of a child, though rare, is far from being an exceptional fact. Childish pain, which our indifference too often disdains, can attain an unheard-of degree of keenness. We do not know how to understand children; we judge them according to ourselves. We do not take into account the fact that futile causes may develop in these naïve hearts violent emotions equal to our greatest pains. What is only a scratch to a grown man becomes a deep wound to the child. We do not imagine all the anger and the fright that there may be in the child's cries, all the anguish and despair that his dumb attitude conceals. As Malebranche said: "An apple and a sugar-plum make as deep impressions on the child's brain as offices and dignities make on that of a man of forty years." The souls of children are like the mind of a man asleep, in which the slightest sensations are transformed and exaggerated. Too harsh scoldings for a slight fault, a sudden

* Dr. Paul Moreau mentions a child of four years who armed himself with a knife, and, leaning on the cradle of a baby ten months old, horribly mutilated its face (*op. cit.*, p. 256).

deception in the case of a promised pleasure or an expected reward, too vivid impressions before a sight that would not affect us—in fine, the most trifling cause may trouble the child deeply enough to call forth the extreme resolution of suicide, which always contains something morbid.

It will be found of advantage to consult the study published in 1855, on this subject, in the *Annales médico-psychologiques*, by Dr. Durand-Fardel.* The author reports there several examples of the suicide of children. He says: "We have collected twenty-six examples of children suicides between the ages of five and fourteen years; one was five, two were nine years old; two, ten years; five, eleven years; seven, twelve years; seven, thirteen years; two, fourteen years." The *Comptes généraux de la justice criminelle*, from 1835 to 1844, show that out of 25,760 suicides in France, 129 took place before the age of sixteen years.†

The study of the causes of suicide is always heartrending; in children it is, in addition, especially instructive and curious. Nothing could be more trifling than the motives that sometimes act on the weak brains of these suicides of eight or ten years. One boy kills himself for sorrow, towards his ninth year, because he has lost a favourite bird; another, of about the same age, because he has been twelfth in his class. In other cases the causes are more serious: wounded filial affection, a precocious

* Étude sur le suicide chez les enfants, par le Dr. Max Durand-Fardel, 1855, i, pp. 61-73.

† See P. Moreau, *op. cit.*, p. 252.

feeling of honour, determine the voluntary death. Children have killed themselves because they had lost their mother, because they had been called thieves. Harsh treatment, severe reprimands, punishments, are often the cause that disgusts the child with life. In certain circumstances the cause of suicide remains mysterious, and it is then, above all, that the supreme resolution may be attributed to a morbid, insane impulse, rather than to deliberate reflection. Esquirol cites the case of a child who, before killing himself, had written these strange words, evidently the expression of an unhealthy excitement: "I bequeath my soul to Rousseau and my body to the earth." Another ends his days because he has not enough air to breathe easily.

An interesting observation is that of suicides who have succeeded only when grown, after having tried several times in childhood. Esquirol mentions a woman who had tried to drown herself at nine years, and who threw herself into the river again at forty. Gall says: "I know at this moment a very well educated young woman who, when four or five years old, her parents having shut her up as a punishment, conceived the wish to destroy herself. She is always expecting death."*

We cannot repeat too often that in the case of suicidal insanity, as in that of hallucination and the other forms of insanity, the germ of evil that breaks forth at a given moment at the age of maturity, lurks for a long time unperceived during

* Gall, *Sur les fonctions du cerveau*, 1825, vol. iv, p. 338.

the years of childhood and of youth. There is an education of insanity, if I may say so, as there is an education of wisdom, and the morbid manifestations of troubled minds, with few exceptions, are not produced suddenly, any more than the most perfect works of well-regulated intelligence.

IV

We have shown that the majority of the forms of insanity are found in the child, that his sensibility and his will can be affected as well as his intelligence, his outward perception, and his muscular activity. But, the child not being able to put his mental faculties immediately into play in the fullness of their strength, there will be in his case a development of insanity, a succession of different morbid affections, from convulsions of the muscles and hallucination of the senses, to the delirium of the intelligence and of the will.* Nay, for the same reason, the essential types of insanity which are presented at every age will be produced in the child only under milder and less extensive forms. They will present the same symptoms as in the adult, but in miniature. We have already had occasion to say elsewhere that normal mental operations differed from child to man in quantity rather than in quality; reason is less powerful, but it acts in the same way; the imagination has not the same broad range, but its flight is the same. The same thing is

* Systematic insanity is extremely rare in childhood, because the ego, at this age, is not yet sufficiently developed to present a durable and radical perversion." (Moreau, p. 292.)

true of the irregular and disordered action of the child's faculties as of their normal exercise; we recognise the disturbances that characterize derangement in the grown man, but they are abridged, and on a small scale. The child's insanity is the weakened but the exact image of insanity at all ages.

It is not a question, however, of finding in the child's nature all the varieties of insanity, all the strange coincidences, all the fantastic combinations to which the wanderings of intelligence and the irregularity of the sensibility may give place in a diseased mind. What we find above all in the child, are, if I may say it, the elements of insanity: hallucination, simple delirium, unhealthy impulses—elements that Nature will use later to form the tissue of so many painful and complicated forms of madness. Naturally the child escapes alienations caused by alcoholism,* those caused by the abuse of passions, and many others. Certain poisonous plants grow only in appropriate soils. So there are forms of insanity allied with certain social states, with certain degrees of civilization; there are also forms of insanity contemporaneous with such or such ages.

Notice, moreover, that the specialists of our time yield perhaps to a tendency to be regretted when they unnecessarily multiply the different kinds of insanity, when they indefinitely subdivide their subject and found new categories differing from

*To be sure, he does not escape those communicated sometimes by the alcoholism of his ancestors, and we have cited several examples of this.

each other almost imperceptibly. The science of mental derangement is still waiting for its Darwin, a moderate Darwin, who in the multiplicity of facts shall set a few guide-posts, and shall unify varieties now wrongly separated. When this work of reduction shall have been done, we are certain that we shall recognise more easily than we do to-day the existence of the principal forms, the typical forms, of insanity.

While waiting for this time, the most important thing to do is to insist on the causes that produce the facts, at the same time that we examine the facts themselves. Important at every age, the etiology of the insanity of childhood is especially important, because in a nature still young, whose education is not yet formed, in a brain still tender, whose development is not yet complete, the remedy is perhaps easier to find.

The causes of insanity are infinitely varied, as is insanity itself. Is it surprising that a phenomenon so complex, extending through the whole gamut of human feelings, changing separately each part of the soul or all the parts at once, always a mingling of psychological and of moral elements, formed at the same time by an organic lesion and a mental affection—is it surprising that this complex phenomenon should be the result of a multitude of causes? These causes are sometimes moral, sometimes physical. Specialists admit for the majority of cases, and this in a considerable proportion, a predominance of moral causes. For the insanity of childhood, by reason of the nature of a being in whom the moral life is just beginning, we should believe

that the relation is reversed, that physical causes predominate.

Here are some examples of intellectual disorders determined by material accidents and physical disease: Frau Engelken speaks of a child of ten afflicted with St. Vitus's dance, and afterward with delirium, as a result of the extraction of a tooth.* Forbes Winslow cites the case of a boy of six who had convulsions and an attack of mania during dentition.† We have already related the observations of a child that became deranged as the result of vaccination. In others insanity follows smallpox,‡ in others typhoid fever.§ Guislain observed a child of seven whose fits of mania were provoked by a blow on the head. "The most striking example of mental derangement in children that it has been my lot to observe," wrote Dr. Morel, "is that of a little girl of eleven years who after recovering from a disease of the scalp had St. Vitus's dance and soon appeared a veritable maniac." || Material lesions and the abnormal development of the brain are also causes of insanity in the child, as at every age. Ideler mentions a little girl of eleven afflicted with melancholia whose head was of exaggerated size.^ The brain of children is normally

* Allgemeine Zeitschrift für Psychiatrie, v, p. 373.

† Ibid., viii, p. 380. "The first dentition," says Esquirol, in speaking of the convulsions of children, "predisposés them to insanity."

‡ Foville, Dictionnaire de médecine, 1829.

§ Cited by Esquirol.

|| Morel, Traité des maladies mentales, 101.

^ Annales de charité, Berlin, 1853.

soft, and although it is not necessary to liken the child to the old man—which, according to the somewhat poetic expression of a distinguished philosopher,* would be “confounding the rose stripped of its petals with the bud ready to open”—we cannot deny that there is in this fact, as it were, a predisposition to insanity; softening of the brain being, as we know, one of the common causes of senile dementia.†

There is no difficulty in citing cases in which moral causes, especially fear, have operated. Ver-ing and Vogel mention little girls that became insane as the result of an emotion of fear; one of them was taken with a fixed idea of killing her stepmother, whom, up to this time, she had loved dearly.‡ Superstitious terror, a precocious exaltation of religious feelings, fear of hell, demonomania, have an influence also. A little girl of nine or ten, whose parents had excited her imagination by too strong pictures of the future life, one evening saw the devil appearing to her; she uttered a loud cry and fell senseless.§ Epidemics of religious insanity have not escaped childhood; in the tenth or the eleventh century, crowds of children abandoned their families and their country to make a pilgrim-

* Renaudin, *Études médico-psychologiques*, 1854, p. 13.

† Meningitis, on the other hand—that is to say, the direct irritation of the cerebral substance—may cause either an acute delirium, or the suppression of cerebral functions. (Moreau, *op. cit.*, p. 129.)

‡ Psych. Heilkunde, ii, Leipsic, 1818; Rust's Magazine, xii, 1822.

* Crichton Browne, *On Insanity*, vol. xi, p. 15.

age to the Holy Land. In 1605, the children of the country of Labour, influenced by the example of their parents, experienced hallucination and ecstasy.* During the religious wars of Cévennes, seven or eight thousand children assembled and prophesied with the greatest exaltation.†

In many cases the cause of childish insanity is neither exclusively physical nor exclusively moral. The derangement of the moral faculties follows a nervous disease. When we know what a slight relation connects the different disturbances of the nervous system, we cannot be astonished to find that in the child, as in man, chorea, epilepsy, hysteria—in a word, the different nervous disorders—appear only with their ordinary train of intellectual troubles and delirious symptoms.

We should commit a very grave error if we attributed the madness of children only to the accidents that affect them, to the nervous or other diseases that assail them, to the faults of education, which can very easily warp their intelligence and pervert their sensibility. Most often we must go farther back than birth—to the period of gestation, to the emotions of the mother during pregnancy. An observer reports that of ninety-two children born during the siege of Landrecies, sixteen died at birth, thirty-five languished a few months, ten

* See Calmeil, *De la folie considérée au point de vue pathologique, historique, etc.*, vol. ii, p. 434.

† Dr. Moreau (of Tours) tells of a girls' school, in which one child of four years having been taken with a fit of epileptiform convulsions, all her classmates were seized by convulsions of the same sort.

were idiots.* We have to go still farther—to the habits of the parents, the temperaments of the family and of the race—in order to find the morbid principle that will disorganize the child's moral faculties.

Especially in individuals born of parents addicted to drink, is it easy to see the fatal influence that the vices of the fathers and the mothers exercise on the moral health as well as on the physical health of descendants. Almost all children born under these conditions die at an early age from convulsions, or if they survive, they remain hysterical or epileptic all their lives.† Dr. Hippolyte Martin has studied eighty-three families in which one or several members showed a nervous super-excitation of alcoholic origin. "Of four hundred and ten children born in these families, one hundred and eight—more than a quarter—had convulsions, and at the end of a few years one hundred and sixty-nine were dead, while two hundred and forty-one still lived; but eighty-three—that is, more than a third of the survivors—were epileptic."‡

If by the mere fact that they have had the habit of drunkenness, parents can transmit a de-

* Compare Moreau (of Tours): The numerous troubles of development, and the exceptional mortality observed in children born at Paris during the last months of 1871, led to their designation in the working population as Children of the Siege (*op. cit.*, p. 37).

† Combe, On the Management of Infancy, p. 76.

‡ See *Annales médico-psychologique*, 1879, i, p. 48. Article by Dr. Hippolyte Martin, on The Alcoholism of Parents considered as a Cause of Epilepsy in their Descendants.

generate life to their children, a nervous temperament whose weakness and excitability are a predisposition, and, as it were, an appeal to convulsions, to epilepsy, to all mental diseases, how much more truly can it be said that parents already insane, whose derangement is declared, should inevitably leave as a heritage to their descendants a sort of instinctive mania and innate insanity. "I have constantly observed," says Dr. Morel, "that the children of a deranged father or mother presented from the first anomalous nervous functions, which were the most certain signs of an ulterior degeneracy, when nothing was done to combat such an appalling danger." *

Heredity is then the most frequent, although the most obscure, cause of insanity in children. It is not in the bad treatment of a crabbed stepmother, in the little deceptions of the childish life, in the brutality of schoolmasters, that we must seek most often for the cause of the evil; the derangement of the faculties has a more distant origin. By a sort of fatal selection, which has nothing in common with what is represented to us as the cause of the progress of the world, the evil is transmitted and aggravated from one generation to another. A simple nervous crisis in a grandfather may become a disposition to melancholia or to mania in the son, a state of absolute idiocy and imbecility in the grandson. Morbid phenomena, still more than normal states of the human consciousness, show the force of this law of heredity, according to which

* See *Annales médico-psychologique*, 1857, p. 466.

the bad is transmitted much more easily than the good, and which becomes more and more the scientific formula of a truth that religions had a presentiment of and have expressed by the dogma of original sin. Moreover, we must not misunderstand the characteristics of this law. On the one side, we may successfully struggle against the disposition that it transmits; the evil is not altogether irremediable. On the other hand, it is itself only the result of the free use that parents have made of their will. There has been, in the life of ancestors, in the family past, a series of unrestrained acts of which posterity will carry the curse. There has been some time—a day, an hour—in which the fate of the entire family has been cast, so that a veritable moral joint responsibility binds parents to children, and heredity, in spite of its false air of fatality, still has liberty as its cause and its principle.

CHAPTER VIII

THE SENSE OF SELFHOOD AND PERSONALITY

- I. Examination of Preyer's theory of the development of the sense of selfhood.—The child's observation of his own body, and the recognition of his image in a mirror.—The part of language in forming the ego.—Opinions of Romanes and Luys.—The sense of selfhood certainly precedes the employment of the words *I* and *me*.—Language makes the ego more distinct, but does not form it.—Development of the idea of the ego.—States of consciousness.—Thanks to repetition of states of consciousness, memory binds them together.—The unity and the continuity of the ego results from the coordination, from the integration of remembrances.—The part of voluntary activity in the development of the personality.—How education concurs in forming the child's personality and the consciousness of this personality. II. The general law of gradual development.—There are, however, moments of sudden transition.—Consciousness does not entirely reveal to us the depth of our being.—The physiology of the child.—Metaphysics of the child's soul.—The development of the child's faculties is more or less rapid.—Principal causes of these differences.—Does sex affect the question?—The influence of education.—The little child cannot be identified with the animal.—The child's faculties differ from those of man quantitatively rather than qualitatively.—Conclusion.

I

PREYER's theory of the origins and the development of the sense of selfhood is among the most

interesting, and merits an examination; it is incomplete, and therefore erroneous; but if it does not take all the facts into account, those on which it rests are exact and cleverly observed.*

Preyer begins by trying to determine how the child acquires the knowledge of his own body, and by what signs we can see that he has acquired it. It is by painful impressions, above all, that the distinction between subject and object will be revealed to him, and that he will come to consider as belonging to him the different parts of his being that he sees and touches, and in which he feels at the same time sensations of pain. But in his observations Preyer insists, above all, on the way in which the child looks at his own image in a mirror; according to him, it would be enough for the child to distinguish his reflected image in the glass for us to say that he has passed "out of a condition in which objective and subjective changes are not distinguished from each other, owing to the gradual growth of the consciousness of self."

There seems to be some confusion in the German physiologist's thought. The observation of the image is doubtless the proof that the child has already acquired, to a certain extent, the consciousness of his body, since he recognises it in the image produced by the polished surface of the mirror. This observation in itself, however, contributes nothing to the development of the ego; it presupposes it. It may serve as external testimony, to find that progress has been gained in the child's

* Development of the Intellect, p. 196 *et seq.*

consciousness, but it is of no use in this progress. The animal also looks at himself in the mirror, but monkeys and cats, when placed before a mirror, take their images for other monkeys, other cats; we see them go behind the mirror, even entirely around it, as if to look for them. This proves simply that they are capable neither of enough attention for a representation, a mental image, of their own body to be formed, nor of enough intelligence and reflection to have the idea of their personal individuality. In the beginning the child is at the same point. "In the fifty-seventh week," says Preyer, "I held a small hand-mirror close to the face of the child. He looked at his image, and then passed his hand behind the glass, and moved the hand hither and thither, as if searching." Several weeks afterward, on the contrary, Axel smiled at his image, or made faces at it. It is evident that he believed that he had to do with a twin, another self, and the animal never goes so far as this. If the child comes to it, it is simply that for other causes, and by reason of the particular conditions of his consciousness, he is soon in possession of at least a vague and confused sense of his personal existence. Preyer, in a way, confuses effect with cause. It is evidently arguing in a circle to say that the child who recognises his own image, or who takes account of his own body, draws from these two facts the idea of his personality. On the contrary, he brings this idea with him; it renders these two facts possible, and in order to say "My body," "My image," the child must previously have had more or less the

consciousness of self. We must seek elsewhere, then, for the real origins of the personality.

Preyer shows clearer perception in refusing to consider language the source of the sense of selfhood. In this he differs from a number of observers, who do not hesitate to say that the child acquires this feeling in learning to talk, and especially on the day when he speaks of himself no longer in the third person, but using the words *I* and *me*; when, for instance, he no longer says "George is good," "Marcel is hungry," but "I am good," "I am hungry."

Romanes does not hesitate to make the formation of the sense of selfhood a result of language. "The change in the child's phraseology, when he ceases speaking of himself as object to speak as subject, is seldom produced before the third year. When this change has been effected, we have definite proofs of a veritable, although still rudimentary, consciousness. It is even probable that this change would not take place so soon if it were not favoured by the "social medium," for, as Sully says, the relation of the self and the not-self, including the relation between the "I" and the "you," is constantly brought to the child's attention by the language of others.*

It is in Luys, above all, that we find the doctrine of the new nominalism clearly formulated, according to which the pronoun "I" would have a magical power of creating selfhood. "Children," says Luys, "towards the second or the third year, talk

* Sully; *op. cit.*, p. 377.

as they feel. They are accustomed to view themselves as a body having external form, and occupying a determinate place in space. Even their name is not yet assimilated and completely incarnated in them as the concrete expression of their whole being. They still preserve a certain shade of objectivity; in the primitive forms of their language, they speak of themselves in the third person, as though of some one strange to them, and show their emotions or their desires according to this simple formula: Paul wants such a thing, Paul has a headache. It is only little by little and in some measure by the effect of incessant efforts, of a continued trituration, that he comes to learn that the ensemble of his personality, having reached a state of unity, may manifest itself in a somewhat abstract form other than that of a proper name, and that its equivalent formula is represented by the words *I*, *me*. By a new effort of abstraction, the child accepts unconsciously this conventional notion that is furnished him ready made, and as it is easy, expeditious, usual, he appropriates it, uses it, and gradually brings it into his ordinary conversation."*

Luys's theory, you will see, tends to present to us the idea of the ego as suggested, as whispered to the child by the words *I* or *me*, which he has finally been taught to pronounce and to comprehend. The child, so to speak, will put on his personality as he puts on his clothes.

It is easy to say in answer to these new nominalists, as to all nominalists, that the word can have

* Luys, *Le Cerveau et ses fonctions*, p. 190.

meaning only if it corresponds to an idea already existing; that it follows the idea, that it defines it, if you will, but that it does not create it. This is the point that Preyer saw clearly when he characterized as erroneous the general opinion "that the 'I' feeling would begin to be formed when the employment of *I* or *me* began. There can be no doubt but that the child knows himself vaguely for a long time before he can conjugate verbs in the first person."* When he designates himself by his own name, it is not the least in the world because he takes himself for a third person; it is simply the inexperience of language, passive imitation of expressions used by his parents, when they speak of him, when they say, "Paul is naughty," or "Paul will hurt himself." Preyer gives us interesting observations on this subject. "Many headstrong children have a strongly marked I feeling, without calling themselves by anything but their names, because their relatives in speaking with them do not call themselves 'I,' but Papa, Mamma, Uncle, Grandma, and so on, so that the opportunity early to hear and to appreciate the words *I* and *mine* is rare. Others hear these words often, to be sure, especially from children somewhat older, and use them, yet do not understand them, as is shown by the fact that they add to them their own names." Preyer then is right

* Perez is of the same opinion: "Although the contrary is generally held to be true, I cannot admit that when children speak of themselves in the third person, it is because the notion of their personality and the term that expresses it are not yet completely separated from external objectivity." (Les trois premières années de l'enfant, p. 324.)

in concluding that the I feeling precedes the acquisition of appropriate language. "By means of speech only, the conceptual distinction of the I, the self, the mine, is made exact; merely the development, not the origin, of the I is favoured."

So far the results of our analysis have been negative, and we have to seek elsewhere than in the facts already referred to for the cause of the personal consciousness. What does Preyer suggest? Truth to tell, in his definite conclusion, nothing but the doctrine of the sensualists, of those who think that the self is only a collection of sensations. According to him, there are in the beginning several distinct consciousnesses, each giving birth to an ego. "The ego of the brain is other than the ego of the spinal marrow; the one speaks, hears, sees, tastes, smells, and feels; the other merely feels, and at the first the two egos are absolutely isolated from each other." Two egos—this is not enough to say; in reality there would be as many as there are sources of perception. "At the beginning, when the centres of sight, hearing, smell, and taste in the brain are imperfectly developed, each of these perceives for itself, the perceptions in the different sensitive areas having as yet no connection at all with one another, just as the spinal marrow at first does not communicate, or only very imperfectly communicates, with the brain." * How the union,

* Ribot also believes that "the individuality is the association and the condensation of elementary consciousnesses, at first automatic and scattered." (*Les Maladies de la personnalité*, p. 151.) "The consciousness," he goes on to say, "is a sum of states."

the grouping of these different egos into one ego, could be accomplished, Preyer would really not be able to explain. Indeed, if each organ of perception by its exercise furnished the idea of a distinct ego (which, moreover, is not so, the idea of the ego presupposing conditions more complicated than a simple series of perceptions of the same sort), it seems to us that it would be impossible to understand how these different personal consciousnesses could be joined and fused, to be finally a consciousness one and indivisible, which is the foundation of the real idea of the ego. The division into two egos, the double personality, as manifested sometimes in cases of morbid psychology, is a rare exceptional thing, which is explained only by a perturbation of the organism. But how can we admit that each day, in the regular conditions of existence, the converse movement, which would consist in unifying distinct egos, six or seven at least, is renewed for each child? In resolving the difficulty, the importance of which he does not seem to suspect, Preyer is content to plead that the sense-perceptions soon become simultaneous, that the child smells and touches, sees and hears, sees and touches, and so on, at the same time. From this would result a bond, a relation between the different centres of perception, what Preyer calls "bonds of intercentral association." But if Preyer thus approaches unity, he nevertheless does not attain it as yet. In order that the building up of the ego should be possible, according to these principles, it would be necessary that the sentient individual should develop all his senses at one and the same

moment, that all the functions that the consciousness relates to the ego should be called into play in a sort of unified and common vibration. But this is not so; our impressions are successive; they come one after the other in time. They can be produced at the most in twos, and I do not know even that there has ever been any real simultaneity. In any case, at no moment is there this concentration, this condensation, in a unique sensorium, of all the different sensations and perceptions of which a human being is capable.

This is so true that, after all, Preyer ends by presenting the feeling of selfhood as being only an abstraction, and consequently as not corresponding to a reality. "This abstract 'I' concept that belongs only to the adult thinking human being, comes into existence in exactly the same way that other concepts do—viz., by means of the individual ideas from which it results, as e.g., the forest exists only when the trees exist."—The ego would be then purely abstract, not even a collection of particular states. "The I cannot exist as a unit," says Preyer, "but still less is it an aggregate;"* and the consequence would be that the child cannot reach the higher idea of the ego. The secondary egos, corresponding to isolated sense-domains, are not yet blended in the young child; there is no unity, because he still lacks the organic bonds—

* It would seem, however, from the comparison that Preyer uses and that we have just cited—"the forest exists only when the trees exist"—that the ego corresponds to the forest, the sum of all the elements that compose it. We must agree that there is some obscurity in Preyer's language.

translated into psychological language, he still lacks the faculty of abstraction.

We are still convinced, on the contrary, that the child is very early capable of knowing himself, of distinguishing himself as a person, and that because he really is a person. The idea of the ego appears only when the ego is formed; but the ego is formed in the degree possible to the intellectual weakness of the child when the successive states of consciousness have been connected, associated, by memory, and when once formed it is developed and strengthened when the voluntary activity has come to animate the consciousness.

The point of departure in the evolution of the idea of the self is evidently the conscious fact. But a multitude of conscious facts unfold long before the ego appears.* Consciousness, indeed, or, to

* "It is not consciousness that we deny the new-born child, it is the consciousness of self. It is evident that he has sensations, but he does not localize them. Doubtless the sensations proceeding from different points of the body must each have a special character; but to learn to distinguish them and to attribute them to one point rather than to another, long experience is necessary; the frequent repetition of these sensations must render possible their subjective reproduction associated with the image of the part of the body from which they proceed. Only little by little, then, can the child form a more or less complete topography of his own body. But, as all parts of our body are put into communication with the nervous centres, as the latter reproduce subjectively the image of several of these parts or of their totality when a single one is excited; as, finally, this reproduction is necessarily the most frequent of all, the *ego* forms the habit of considering itself as an individual, as a whole, one and indivisible. But for the child to have also the feeling of the continuity of the ego, it is necessary for memory to arrive at a high degree of develop-

speak more exactly, the fact of being conscious of a phenomenon of one sort or another, does not necessarily connect this phenomenon with the notion of the ego, and does not necessarily imply *ipso facto* the distinction between subject and object. We might hold that these states of consciousness, these sensations, and these perceptions, in spite of the diversity of the objects that they present to the child, have all a common character—that of being felt, of being conscious, and that consequently, from the comparison of these phenomena, all similar in one point, there would be slowly evolved the idea of their resemblance, which would be precisely the idea of the ego. But this operation would be possible only if the states of consciousness appeared in turns, so to speak, before a soul all formed, capable of grasping and of judging of relations. But this hypothesis is untenable.

The successive states of consciousness have another characteristic, that of recognising themselves when they reappear. Memory binds together the scattered consciousnesses, separated by each successive act of the sensibility, and of perception. It is almost a truism to add that memory can play this part only when the same phenomena of consciousness are repeated. "The consciousness of the self," says Fouillée, "demands that the same sensation or representation *should be repeated* ; it presupposes a sort of integration of similar elements, an organization of resemblances amid differences." * It is al-

ment, which cannot come until much later." (Herzen, *Revue philos.*, 1878, ii, p. 380).

* Fouillée, *L'Évolutionisme des idées-forces*, 1890, p. 46.

lowable to conjecture as to what would become of the ego, and whether the feeling of the self would ever succeed in forming, if the impressions made on the consciousness were changed unceasingly, so that the same ones should never appear twice.

Because we have a sound sleep without dreams, we all experience every day an interruption, a cut, so to speak, in the continuity of our consciousness.* But is it not true that on awakening we have, for several instants at least, only a confused feeling of existence, that we no longer clearly distinguish our ego? It takes us several minutes to get a footing again, in a way, in the course of conscious life, to seize upon our personal existence again, and to join to our last conscious state of the night before the first conscious states of our awakening. If, for instance, we have slept in a hotel for the first time, where no sensation is familiar to us, where new objects present themselves, where we do not find the familiar perceptions of the room that we ordinarily inhabit, neither the same curtains, nor the same windows, nor the same upholstery, where, in a word, memory recalls nothing to us, we have still more trouble in returning to the possession of our ego.†

The child passes through a state analogous to

* This is still more true of one coming out of a faint, a swoon.

† This is not the only case in which light could be thrown on the psychology of the child by appealing to what happens in our consciousness at the moment of awakening. For instance, I have had the impression several times on awakening that objects comparatively far from my eyes were very near them; when first opened, the eyes cannot appreciate relations in space.

that which we have just described, and what in the adult passing from sleep to a waking state lasts only a few instants, is prolonged in the child for several months. Just as there is a gradual development of consciousness, steps to gain in passing from the unconscious to the conscious, so also there is a slow evolution in passing from a confused feeling of existence to a clear idea of self. Memory plays the principal part in this elaboration. The ego is, so to speak, a woof of remembrances, or an ensemble of remembrances, fitted one into the other, according to Taine's expression. Unity, the continuity of the conscious life, is rendered possible only by the co-ordination of remembrances; and in the abnormal phenomena of the double consciousness, the dividing of the personality has this characteristic, that none of the remembrances of one of the two lives is represented in the other.

Let us hasten to add that the child does not find the principle of the notion of the ego only in the association of his remembrances. It is from his voluntary activity,* from his power of attention, from his little daily efforts, also, that he draws the feeling of his nascent personality. On this point Preyer himself furnishes us with arms to combat the theory that he upholds, which tends to make an abstraction of the ego. Is it Preyer or is it Maine de Biran who writes the page that we are going to cite, or at least its conclusion? "Another impor-

* According to Wundt, the most important condition of the genesis of consciousness is furnished by the muscular sense, in the acts of voluntary motion. (Vorlesungen über die Menschen und Thierseele, chap. xviii.)

tant factor is the perception of a change produced by one's own activity in all sorts of familiar objects that can be taken hold of; and the most remarkable day, from a psychological point of view, in any case an extremely significant day in the life of the infant, is the one on which he first experiences the connection of a movement executed by himself with a sense-impression following upon it. E. g., in the fifth month the child discovers the fact that he himself, in tearing paper into smaller and smaller pieces, has again and again the new sound-sensation. At present there is not indeed, as yet, any clear insight into the nexus of cause; but the child has now had the experience that he can himself be the cause of a combined perception of sight and sound, to the extent that when he tears paper there appears, on the one hand, the lessening in size; on the other hand, the noise. The patience with which this occupation is continued with pleasure is explained by the gratification at being the cause, at the perception that so striking a transformation as that of the newspaper into fragments has been effected by means of his own activity."*

Preyer continues by citing a great many other examples in which the child shows himself to be absorbed by occupations apparently without interest, like throwing stones into the water, carrying footstools from one place to another, arranging stones or bonbons in a row. "The satisfaction that these occupations afford must be very great, and it probably has its basis in the feeling of his own power

* The Senses and the Will, p. 191.

generated by the movements originated by the child himself (changes of place, of position, of form) and in the proud feeling of being a cause. . . . This is not mere playing, although it is so called ; it is experimenting. The child that at first merely played like a cat, being amused with colour, form, and movement, has become a causative being. Herewith the development of the 'I' feeling enters upon a new phase, but it is not yet perfected."

This observation, which Preyer mentions in passing and which is only an incidental point in his theory, might well be the solution of the whole question. The individual becomes a person only when to the feeling of his unity, his continuity, he adds the consciousness of being a causative force.* The day when the child, animated by a new impulse of boldness, escapes from his mother's embrace to walk and run all alone, it is not only his little external individuality that is asserted in this act of locomotion and of independent life ; it is assuredly his moral personality also that acts and feels itself acting in the effort accomplished. The more the child dares, the more he undertakes, at the same time the more will his being and his consciousness of it grow. Whatever may be thought of its first origin, whether it is the higher unfolding of an organism or the direct manifestation of an immaterial cause, the consciousness responds in its

* Compare Tiedemann. "At nineteen months the individuality of my son, more and more developed, showed itself more evidently by the pleasure that he felt in doing anything difficult: crowding through a narrow place, taking dangerous positions, carrying heavy things, etc."

strength and its clearness to the intensity of the action that it expresses.

This is the way in which education can concur in the development of the child's personality, by respecting his liberty, by calling forth his initiative. What is deepest within each one of us, what by definition ought to escape the action of outward influences and have its principle only in the absolutely spontaneous forces of nature, is a new proof to us that the social medium, the family medium, at least, never loses its rights. The child brought up under constraint, who is only the passive instrument of his parents' will, in his docile and resigned inertia will develop a personality only with difficulty, if at all. On the contrary, he that is given up to his own direction as far as the rules of law and order permit, will in a relatively short time acquire the feeling of his personality; he will know the pleasure of the little triumphs gained by his efforts, also the pains of disappointment; and a precocious excitation of his personal feelings will engender the qualities that are the natural effect, courage and emulation, as well as the faults that follow, pride, ambition, obstinacy. Moreover, it is not necessary to think that mere negative education—I mean that which is content to let things take their course—would be favourable to the growth of the personality. Parents who by both word and act show that they sympathize with the least acts and gestures of their children, who praise them when they do well, who blame them when they do ill, are also educators of the personality. "It is when the child's attention is driven inward in an

act of reflection on his own actions as springing from good or bad motives, that he wakes up to a fuller consciousness of himself." *

II

The development of the idea of the ego has furnished us a final example of this slow gradual advance of which we have given proofs on every page of this work. The facts of mental order, whatever they may be, before acquiring definite form, have been for a long time attempted, sketched in the previous life of the individual. Nothing is formed all of a sudden, by a miracle of nature. The general law of which science finds the action in all parts of its domain, in the development of the plant as in the organization of the nervous system in the animal, finds nowhere a more striking verification than in the study of the psychical life of the child. From the unconscious to the conscious, from an automatic state to a voluntary state, from the diffuse scattered impressions to the concentration of all the states of consciousness around a unified, identical ego, there is a multitude of insensible transitions and of little successive advances.

In this slow evolution of the consciousness which is lighted up gradually there are, however, moments of sudden crisis, of rapid and, so to speak, instantaneous progression. "There is some reason to think," says Romanes, "that when the growth of consciousness has attained a certain point, it makes,

* M. Sully, *op. cit.*, p. 377.

so to speak, a sudden leap of progress, which may be taken to bear the same relation to the development of the mind as the act of birth does to that of the body."*

The evolution, slowly prepared for and followed out, bursts forth all of a sudden. In an hour, in a minute sometimes, there come quick advances in the child's soul that transform it and make up for the apparent slowness and inertia of the preceding periods; just as we see in Nature sudden bursts of vegetation which in an afternoon of clear spring sunshine make the buds on the hitherto bare and dry branches of the trees spring forth on every side. The latent work of the mental life explodes in a sudden flash, which shows us the mysterious under side of the child's thought and sensibility. A word, a reflection of unexpected penetration, surprises us and announces to us that the child, without our suspecting it, without any outward sign having betrayed the latent and mysterious work that has been accomplished, has taken several steps forward, and that he has conquered more territory than the apparent manifestations of his activity up to this time would lead us to suppose.

Even in these unforeseen appearances of a consciousness superior to what the immediately preceding conscious states would have led us to expect, it is not proved by any means that the law of gradation has lost its rights. Consciousness doubtless seems to be lighted up suddenly; but who can say that in these awakenings, in these sudden hatch-

* Romanes, *Mental Evolution in Man*, p. 208.

ings, there is not the effect, the result of a series of inner transformations that have passed unperceived, because by their nature they escape the observation of the witnesses of the child's life? The child does not tell us all that he feels, all that he thinks. Several links in the chain of his conscious states may escape our investigations, and still exist none the less. On the other hand, we must emphasize the fact that the consciousness, although it reveals the psychic fact and is, as it were, its phenomenal appearance, does not permit us completely to attain this fact. It does not penetrate to the depth of our being. The psychology of the child such as we have outlined is necessarily incomplete, and could not pretend to clear up all the mysteries, to resolve all the difficulties of so complex a subject. There is first the question of the constant relations existing between the work of the organization of the brain, of the nervous system in general, and the evolution of the mental functions. There is, besides, the question of the essential nature of the force, whatever it may be, that presides over the development of these two series of phenomena and associates them in the unity of life. In a word, the history of the intellectual and moral development of the child will not be definitely and truly satisfying until the day when it is supported either by a physiology of the child, which is still far from perfection, or by a system of metaphysics of the child's soul, which perhaps will always be impossible.

Moreover, neither this physiology nor this metaphysics could in their conclusions prevail against the results of our study; on the one hand, the bond,

the autonomous co-ordination, so to speak, of conscious states, which, whatever may be their roots in the nervous system, are engendered one by the other, becoming forces that determine other conscious states, and form consequently a world apart, an ensemble of facts *sui generis*, ending in the unity of the personality; on the other hand, the progressive character of the unknown principle of mental life, which is not from the first day all that it can and ought to be, but which becomes it little by little—for it would be impossible to comprehend the fact that a soul, a substance, put all at once into possession of all its faculties, would exert them only little by little.

The doctrine of evolution, an hypothesis not yet proved so far as it concerns the species and their transformations in the history of life and of thought on the globe; is, on the contrary, a certitude absolutely verified by facts, so far as it concerns the development of the organs, of the functions, and of the faculties in the history of each individual.

This evolution, moreover, can be accelerated or retarded. A little savage will not develop as quickly as a child belonging to races that have been civilized for a long time. The heredity of the race either weighs on the new-born child or buoys him up in his course. In the same race, in the same people, the evolution will be more or less rapid according as the child belongs to such or such family; by the side of the heredity of race, there is the heredity of family; fathers and mothers live again in their sons and in their daughters. In the same family, from one brother to another we

see very appreciable differences; the children, although born of the same parents, are not born under the same conditions; there are the older ones and the younger ones; there are consequently many different predispositions; heredity could not be the same for all. Finally, if it is true that there is a greater similarity of development between twins than between two brothers of different ages, particular traits of development belonging, nevertheless, to each one of them remind us that heredity is not everything; that there is, so to speak, an inborn individuality, a mysterious personal preformation.

These are in sum the natural causes of the differences that are manifested in the development of individuals, the causes that explain in part why Axel, Preyer's son, is always behind, why Tiedemann's son is always in advance; why, finally, in a multitude of beings called one after the other into life, there are not two whose development is entirely the same.

Is it necessary in the history of the child's soul to take sex into account? Certainly little girls are not in every point like little boys in their way of acting, in their sensibility, in their intelligence.* People tell us that they talk earlier; that they show very early the traits that will characterize them as women—their subtlety, their finesse, a little less power of abstraction and generalization in reasoning, a little more vivacity and nobility in

* "Among deaf-mutes," says Ladreyt de la Charrière, "the little girls are more calm than the little boys."

their feelings, perhaps a little less activity in their movements. And yet, we think that up to the age of three or four years, where we leave the child, there is no appreciable difference. The observer does not distinguish a boy from a girl at first sight; their faces are alike; their souls also, apart from imperceptible shades, are almost all alike. Their toys are the same, a doll amusing a boy as much as a girl. It is only towards the age of four or five years that there could be question of a distinct psychology for each sex. "Little girls," said Cabanis, "share the petulance of little boys, little boys share the mobility of little girls. The appetites, the ideas, the passions of these beings just beginning the life of the soul, these still uncertain beings that most languages confound under the common name of children, show the greatest analogy in the two sexes. To be sure," Cabanis adds, "an attentive observer can already see between them notable differences; the distinctive traits of nature begin to show themselves in the general forms of organization, in moral habits, or in the naïve accents of affection." But these differences, if they exist at all at a year or at two years, must be very slight, for Cabanis makes no note of them.

Whatever the sex, whatever the family and the race, the development, here slower, there more rapid, imposes the same laws on all children. What a gratifying sight is this regular order, which, in the infinite variety of faces and of characters, bends all the little beings coming into this world to the same yoke, forcing them to develop uniformly, in the same direction, according to a

constant rule of succession, to clear up in the same way the chaos of their nascent emotions and thoughts!

What progress of humanity would not be possible if to this natural order of development corresponded an appropriate education, sure enough of its principles to second the work of the hereditary or innate instincts, vigilant enough to begin this work at the cradle, to organize a favourable medium around the child, to do away in what he sees, in what he hears, with all that might thwart or turn aside the natural tendencies of the sensibility and the intelligence; in fine, an education sufficiently enlightened to furnish the child's weakness with all the help, all the support and the excitation that it needs!

If one truth has been brought out by all our observations, it is that the child can do nothing without the aid of education. Contrary to Ribot, who says that education amounts to little in comparison with innate personality and heredity, we are convinced that the action of parents, that the action of society, is very important, and that this explains, even more than does the action of Nature, the difference between intelligences and characters. For certain absolute partisans of Darwinism there would be nothing but reminiscence in the nature of the child. The new-born child would have nothing to discover, nothing to invent; he would have but to remember. Plato would have found long ago the true formula of existence, although he understood it differently. The child would have no more trouble in becoming a man, in putting into play

the faculties which would be only sleeping possibilities of actions already accomplished by a series of generations, than a mere prattler would have in repeating mechanically a story that he had been told a thousand times.

We forget too often that, in spite of the hereditary transmission of instincts and of faculties, all has to be done over, to be begun anew, for each individual. The mental life is not composed of a series of easy reminiscences; it is a succession of laborious acquisitions and of personal conquests. Heredity transmits to us not a soul all made, but merely germs, which develop only with the help of time, of work, and of reflection. The evolution of the species ought not to prevent our seeing the development of the individual, repeated unceasingly.

The child is at once the work of nature and the work of education, this word education comprising all that his personal experience permits him to acquire. It is impossible to say exactly in what proportion there is mingled what he gives and what is given him.* There is no chemical analysis so dif-

* Perez raises the same question in these words: "I have often asked myself this question, not without anxiety, when I found myself face to face with a little child, a mysterious sphinx that unconsciously watched me observing him, while his great calm, wondering eyes disconcerted my laborious inductions. I remember that such or such an action, for a long time concealed in the receptacle of the rudimentary faculties, suddenly leaped into the light, awakened by the chance presentation of certain favourable circumstances, and I asked myself whether I ought not to restore to instinct and to heredity what my observations gave me the right to take from them, in order to give it to consciousness and to individual experience."

ficult as the mental analysis that would consist in distinguishing the elements belonging to spontaneity and those resulting from the action of education. There is here an obscure collaboration, in which only the participation of two concurrent forces is certain; just as in a well-constructed drama, composed by two poets that do not explain their method, it is difficult to tell which parts belong to each.

However convinced we may be of the power of education, nevertheless we do not go so far as to believe that education makes the child what he is; that is say, a little more than an animal, although much less than a man. As soon as he can speak, as soon as he can say *I*, to say nothing of the characteristic traits of his sensibility, of his memory, of his imagination, of his reasoning, to say nothing, above all, of his weakness and also his greatness, the obligation to acquire all that the animal knows by instinct—the child has put an abyss between the animal and himself.

In the comparisons that the philosophers of Darwin's school draw between animals and man, it is easy to distinguish a double tendency of which we conjecture the intention and the end: on the one hand, the human faculties are considered in their lowest signification, the notions that represent them are stripped of their essential content; on the other hand, the slightest facts in the life of animals are transfigured, exalted, some of their actions being interpreted with complacent admiration. Thanks to this contrary movement that tends to lower man while it raises the beast, the distance be-

tween these two forms of existence is singularly diminished; the two banks draw near, and the passage from one to the other is easy. However, since they mean well, the evolutionists do not hesitate to recognise the fact that the difference between the child and the animal is already sensible. "We could not confound, from the point of view of intelligence, the mind of the little child and that of the grown dog." Thus speaks Darwin, more just in this than his opponent Agassiz, who, I do not know why, has written somewhere, "I do not see any essential difference between the intelligence of a child two years old and that of a young chimpanzee."

If Agassiz spoke truthfully, Nature having already shown her strength in the child of two years, it would be necessary to conclude that the educative and social instincts would be the only difference between man and the animal. But no one would dare to hold to such an enormity. When there is only language, the demarcation between the little child and the animal is clearly traced at two years. "The organs of articulation," says a physiologist, "exist in mammifers as well as in man. If, then, man articulates and the animals do not, it is because an intellectual act comes in in the case of man." * Is not this recognising the fact that language, although it is to be a great instrument of the progress of intelligence, is itself the effect of intelligence?

Is this saying, as Michelet did,† that the little

* Bécclard, *Physiologie*, 1884.

† Michelet, *Nos fils*, p. 79.

child, already very superior to the animal, may be represented as being almost from his very birth a little man of perfect, complete, nervous organization? There is some exaggeration in speaking in this way. Doubtless on most points children are nearer us than we are generally disposed to believe. They think more than they can say, as long as the faculty of expression is imperfect. With less firmness and sureness, their intellectual faculties have already the charms that they will keep all through life. They reason in their own way, and though their conclusions may be founded on slight premises, nevertheless there is a logical advance; just as the stomach of the new-born babe acts, although it can digest only milk. Doubtless a baby's emotions have not the intensity that they will acquire later; the vivacity of sensations is proportionate to the strength of the sentient being. But in its moderate proportions, the childish sensibility ranges over almost the entire gamut of the feelings of the adult. In a word, and without following out the enumeration, we may say in a general way that the child's faculties differ from those of the man quantitatively rather than qualitatively; or, in other words, that the child possesses all of the distinctive attributes of human nature, but that he possesses them only under reduced forms and in limited proportions. And this is enough to justify us in not saying with Michelet that the child is already a man.

What we need have no hesitation in saying, is that when he has come to the age of four years the child has finished his first development, that

which has introduced the beginnings of all where there was nothing. If we appeal to the conscious states of this age, we shall be convinced that none of the essential functions are lacking. The later development will have to fortify what is still weak and slender, to solidify what is as yet soft and without consistence. The senses will make new acquisitions each day, and memory will enrich their treasures. Knowledge will extend, but the instruments are already made. Attention will prolong its power of duration, and will gain strength of concentration. Our will shall find in more decided and more fixed ideas a more solid and more resistant support. In a word, all the faculties will enlarge, and the effect of the growth will be such that one could no longer recognise in the abstract generalizations of a man of science, or in the moral force of an energetic character, the poor little faculties that preside over the first efforts of the child's reasoning or over the first acts of will and of courage. They will be the same faculties, however, with the difference that results from the passage from the less to the greater; just as the hard, accentuated traits of the marked and pronounced physiognomy of the mature man are, although unrecognisable, the delicate, undecided, indistinct traits that made up his smiling, rosy, baby face. Except for the new elements that the passions of puberty will occasion in the young man, the future will only amplify the faculties without increasing the number. At four years the child's soul is really all unfolded. The intellectual frames are ready; there remains but to fill them. All the springs of the

machine are in place; there is nothing more but to make them act. The sketch demands only to be transformed into a picture. The child needs merely time, study, and experience, to become really a man. In a word, as Aristotle said, nature and early education have begun everything; the part of future education will be to finish it all.

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